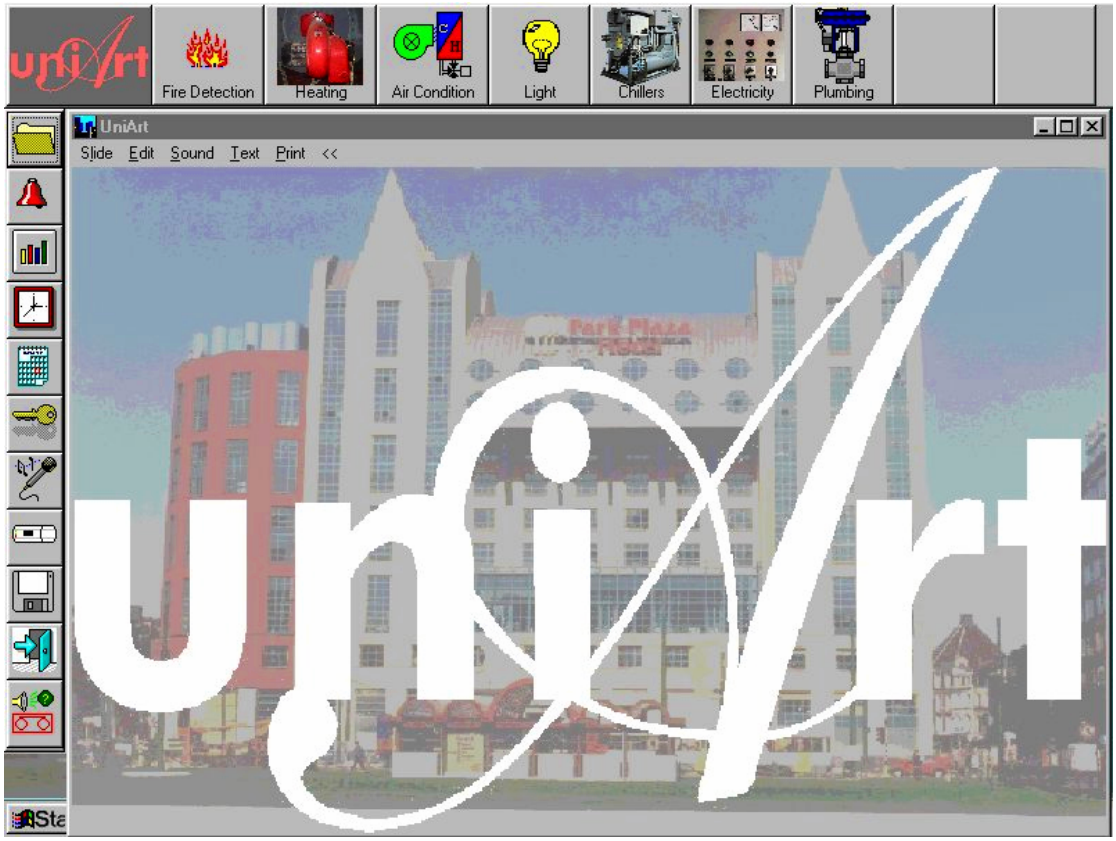
UniArt User's Manual



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(Compiled by Caroline Johnson)

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SECTION 1

GETTING STARTED

Chapter 1- GENERAL

UniArt is a PC-based, user-friendly SCADA software package intended for monitoring and controlling DDC/PLC controllers.
UniArt establishes a natural Man Machine Interface (MMI) between the control staff and the site's control system.
UniArt is especially designed to monitor and control heating, ventilation and air-conditioning (HVAC) systems as well as electrical, energy, fire detection, lighting and extinguishing systems.

The communication server that connects the UniArt to the controller is the centre of the system. This server sets the communication protocol between the computer/PC and the controller.

The standard system includes the following items:

- Communication server
- Menu
- Alarm
- Miscellaneous

UniArt uses it's own database. Each page of the database can contain up to 40 groups and each group can be connected to 80 points.

1.1 Software Installation Instructions

NOTE: Close down all applications already running in Windows as this may conflict with the set-up procedure.

Insert the CD to the CD drive. The program should run automatically.
If not, follow these steps:

a. Double-click on "My Computer" icon on the Desktop (*see Figure 1.01*)
b. Double-click on CD-ROM icon
c. Find the UniArt.exe icon and double-click
d. Follow the program's installation instructions

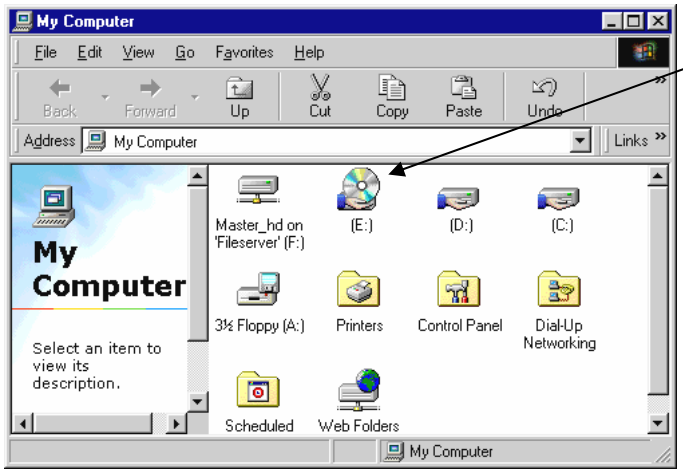


Figure 1.01 – CD-ROM icon in "My Computer"

1.2 Configuring System Modules

This section describes how to define, modify and configure the UniArt modules that are to be run by the computer.

a. Double-click on “My Computer” icon on the Desktop
b. Double-click on the icon for the disk drive where UniArt is installed
c. Double-click on “UniArt directory” icon
d. Double-click on “BIN” folder icon
e. Double-click on “PRJSETUP” icon (*Figure 1.02*)

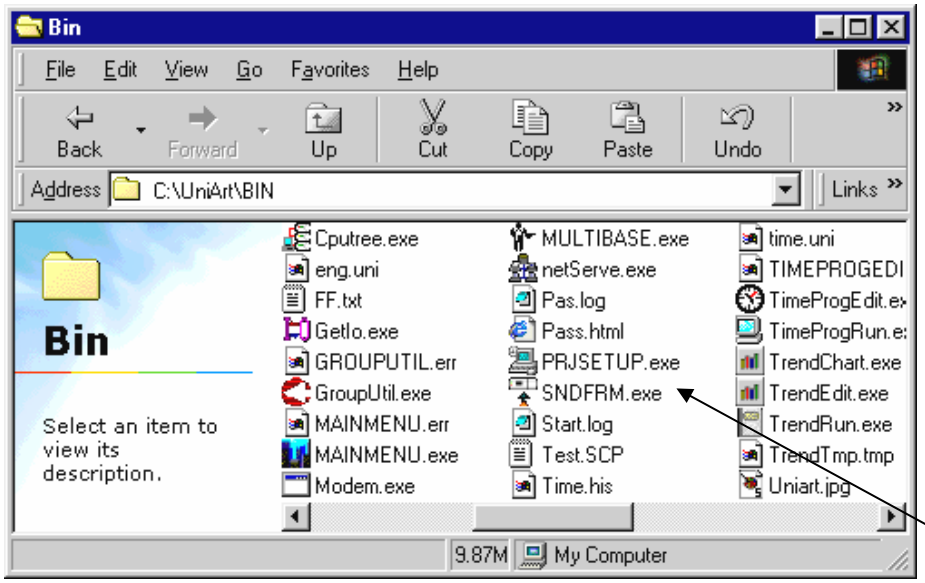


Figure 1.02 - PRJSETUP in C:\UniArt\Bin

The screen that appears in *Figure 1.03* offers the user the basic functions needed to operate the UniArt system.

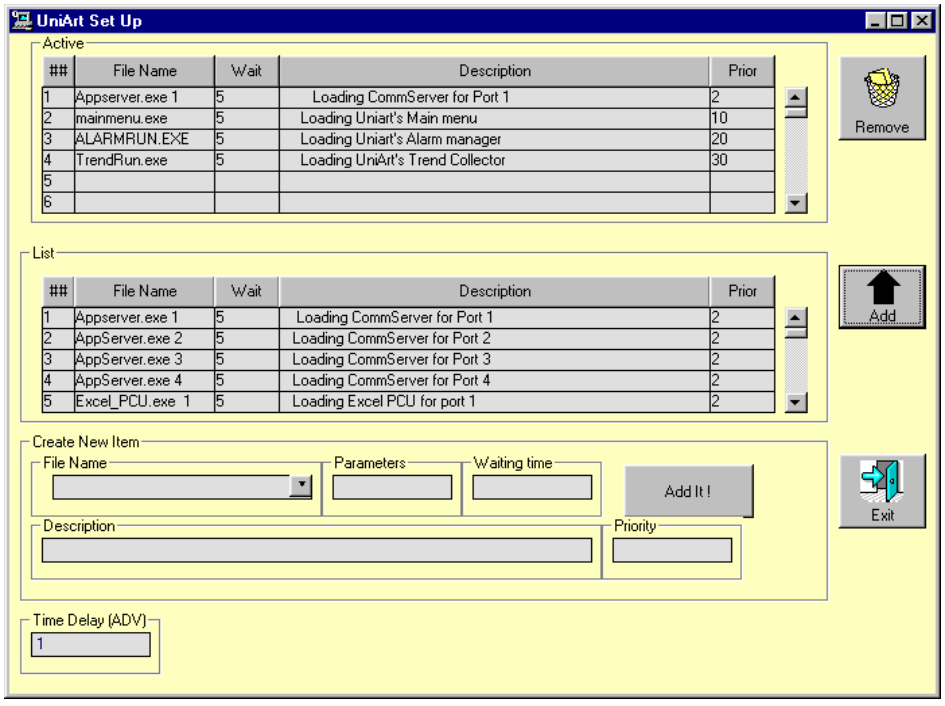

UniArt Set Up
Active
File Name Wait Description Prior
1 Appserver.exe 1 5 Loading CommServer for Port 1 2
2 mainmenu.exe 5 Loading Uniart's Main menu 10
3 ALARMRUN.EXE 5 Loading Uniart's Alarm manager 20
4 TrendRun.exe 5 Loading UniArt's Trend Collector 30
5
6
Remove
List
File Name Wait Description Prior
1 Appserver.exe 1 5 Loading CommServer for Port 1 2
2 AppServer.exe 2 5 Loading CommServer for Port 2 2
3 AppServer.exe 3 5 Loading CommServer for Port 3 2
4 AppServer.exe 4 5 Loading CommServer for Port 4 2
5 Excel_PCU.exe 1 5 Loading Excel PCU for port 1 2
Add
Create New Item
File Name
Parameters
Waiting time
Add It !
Description
Priority
Exit
Time Delay (ADV)
1

Figure 1.03 - UniArt Set-Up

The **Active** frame at the top of the screen shows the programs that have been selected and are currently running.

The files under the title **File Name** are the default items. They include:
appserver.exe 1
mainmenu.exe
alarmrun.exe
trendrun.exe

> NOTE: If you are connected via ethernet you must change appserver.exe 1 to netserve.exe in **Create New Item**.

The column entitled **Wait** shows the delay time between running programs so as to prevent all programs being run together and creating congestion. The default time is 5 seconds.

The **List** frame in the middle of the screen shows options that may be added to the system, such as additional communications ports (use scrollbar when needed). Once items are selected they will appear in the **Active** frame.

In order to select/activate a new item:

a. highlight the relevant file from the **List** frame by clicking on it
b. press the **Add** button to the right of the **List** menu.

Items may be removed from the **Active** frame only. In order to do this, highlight the relevant file and press the **Remove** button to the right of the **Active** frame.

Advanced users may add items that do not appear as default by using the **Create New Item** frame in the lower section of the screen. They may also set parameter, delay time and priority.

EXAMPLE OF DEFAULT ITEMS:
appserver.exe 1...

Once the UniArt software is installed it will appear in the program section of the main Windows menu. Highlighting this folder and placing the cursor over the arrow on the right-hand side will show the UniStarter program sub-menu, (see *Figure 1.04*). UniArt icons will also appear along with the other icons in the bottom right-hand corner of the screen next to the clock.

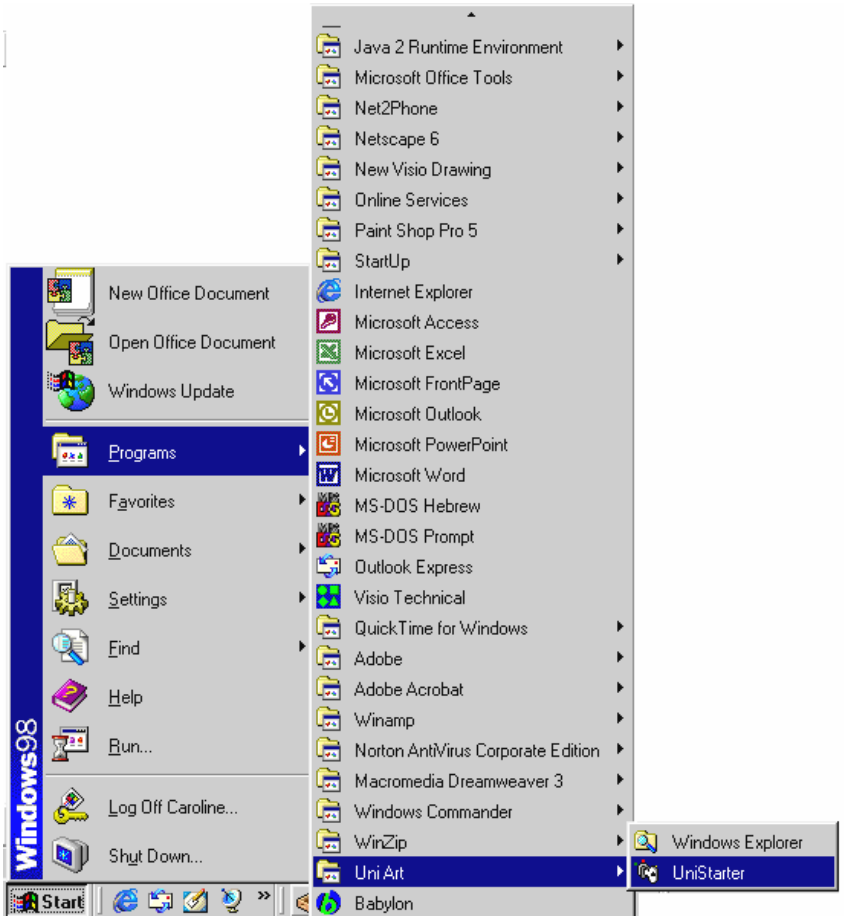


Figure 1.04 – UniStarter location

a) For RS232/485 connection, place the cursor over the ***Appserver*** *menu icon* (*Figure 1.05*) and click on the right mouse button.

b) For TCP/IP connection, place the cursor over the ***Netserver*** *menu icon* (*Figure 1.06*) and click on the right mouse button.

Figure 1.05 – Appserver menu icon

Figure 1.06 – Netserver menu icon

<u>The following options will appear:</u>
ABOUT: details about currently installed version
SHOW MANAGER PAGE: for use by CAL personnel only
SHOW DEBUG PAGE: allows selection of active controllers
LEVEL DEFINITION: allows security access level to be defined
EXIT: to close the program

Select the **Show Debug Page**. Only authorised users will be able to access this page by entering their password.

The menus that appear in *Figures 1.07* and *1.08* will allow you to select the active controllers in the system.

How to use:

1. Connect and define the CPU number of the controller.
2. Remove the tick from the **Demo** box.
3. Place a tick in the box(es) next to the relevant CPU(s).
4. Wait for the CPU to turn green and so confirm that the controller is active.

Here, different colours indicate the different statuses of the controllers.

Green: the controller is active
Red: the controller is inactive (after 10 tries)
Pink: the system is trying to connect (will try 10 times)
Yellow: monitoring the controller status
Blue: data is being transmitted
Light green: the controller was selected, but no connection has been attempted

APPSERVER

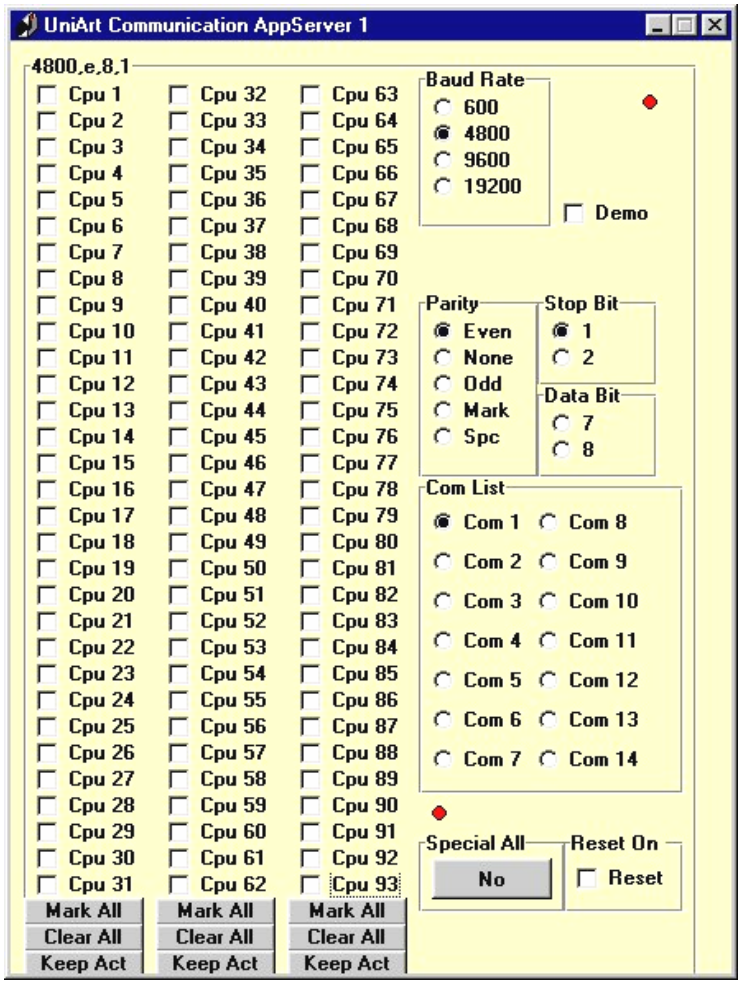

UniArt Communication AppServer 1
4800,e,8,1
Cpu 1 Cpu 32 Cpu 63
Cpu 2 Cpu 33 Cpu 64
Cpu 3 Cpu 34 Cpu 65
Cpu 4 Cpu 35 Cpu 66
Cpu 5 Cpu 36 Cpu 67
Cpu 6 Cpu 37 Cpu 68
Cpu 7 Cpu 38 Cpu 69
Cpu 8 Cpu 39 Cpu 70
Cpu 9 Cpu 40 Cpu 71
Cpu 10 Cpu 41 Cpu 72
Cpu 11 Cpu 42 Cpu 73
Cpu 12 Cpu 43 Cpu 74
Cpu 13 Cpu 44 Cpu 75
Cpu 14 Cpu 45 Cpu 76
Cpu 15 Cpu 46 Cpu 77
Cpu 16 Cpu 47 Cpu 78
Cpu 17 Cpu 48 Cpu 79
Cpu 18 Cpu 49 Cpu 80
Cpu 19 Cpu 50 Cpu 81
Cpu 20 Cpu 51 Cpu 82
Cpu 21 Cpu 52 Cpu 83
Cpu 22 Cpu 53 Cpu 84
Cpu 23 Cpu 54 Cpu 85
Cpu 24 Cpu 55 Cpu 86
Cpu 25 Cpu 56 Cpu 87
Cpu 26 Cpu 57 Cpu 88
Cpu 27 Cpu 58 Cpu 89
Cpu 28 Cpu 59 Cpu 90
Cpu 29 Cpu 60 Cpu 91
Cpu 30 Cpu 61 Cpu 92
Cpu 31 Cpu 62 Cpu 93
Mark All Mark All Mark All
Clear All Clear All Clear All
Keep Act Keep Act Keep Act
Baud Rate
600
4800
9600
19200
Demo
Parity
Even
None
Odd
Mark
Spc
Stop Bit
1
2
Data Bit
7
8
Com List
Com 1 Com 8
Com 2 Com 9
Com 3 Com 10
Com 4 Com 11
Com 5 Com 12
Com 6 Com 13
Com 7 Com 14
Special All
No
Reset On
Reset

Figure 1.07 – UniArt communication Appserver

Make sure that the system is not in demo mode, by removing the tick from the **Demo** box at the top right-hand side of the screen.

The **Special All** and **Reset On** buttons at the bottom of the screen are for CAL personnel only and should not be adjusted.

NETSERVER

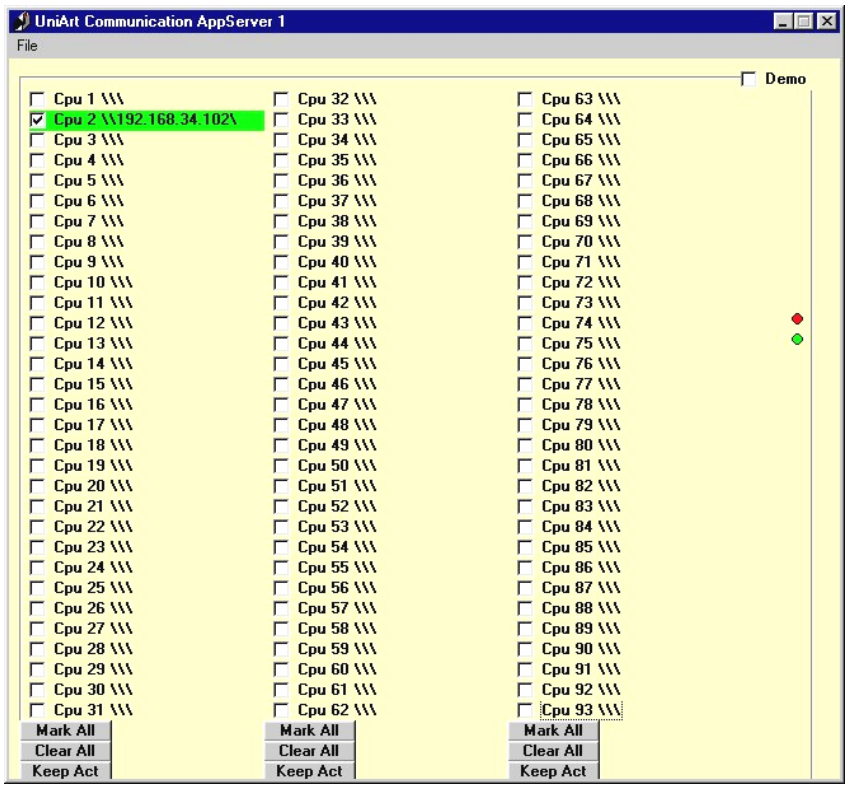


Figure 1.08 – UniArt communication Netserver

Click on **File** and then **NetController** at the top of the UniArt Communication Netserver screen to bring up the screen in *Figure 1.09*.

Figure 1.09 – NetControllers

This screen displays all the controllers that are connected on the network.

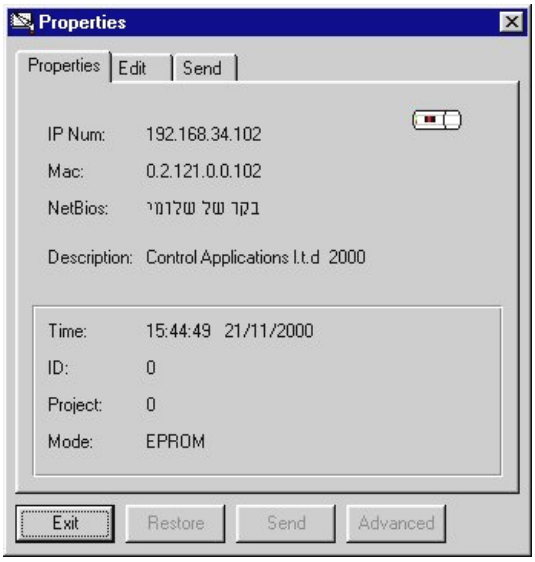
Click with the right mouse button to bring up the following menu.

Figure 1.10 – NetController menu

This menu allows you to arrange the icons as with any Windows files.

View Icons: either **small**, **large** or as a **list**.
Arrange icons: in **asc**ending or **desc**ending order.

Refresh, **Exit** and **Properties** (*Figure 1.11*) to be used as in other programs.



Within **Edit Properties** you can change the NetBios name, IP address and description of the CPU.

Send is for Control Applications Ltd. personnel only.

Figure 1.11– CPU Properties

Click with the right mouse button on the relevant CPU to bring up the window in *Figure 1.12.*

Figure 1.12 – Netserver IP address

Enter the IP address of the controller here.

SECTION 2

WORKING WITH UNIART

Chapter 1 – TASK BARS

- The horizontal bar features a set of icons that represent groups of critical functions.
- The vertical bar is smaller than the horizontal and is used for editing functions, creating alarms, creating groups, setting times and more.

See map of the task bars at the bottom of the page.

Once the programs are loaded their respective icons appear on the bottom right-hand side of the screen in the task tray next to the computer's clock.

Click with right mouse button on the *main menu icon* (*Figure 2.01*).

Figure 2.01 – Main Menu icon

The following menu will appear:

ABOUT: details about currently installed UniArt software
NORMAL UNI BAR: will show the task bars only when the cursor approaches the top left of the screen
SHOW UNI BARS: allows continuous display of task bars
HIDE UNI BARS: hides the taskbar
EXIT: to close the program

Chapter 2 – VERTICAL TASK BAR

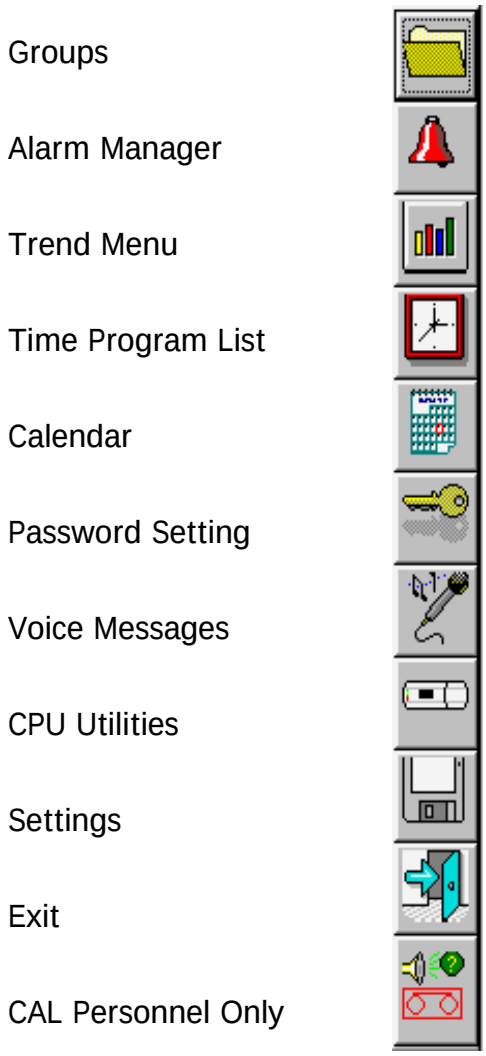


Figure 2.02 – Left Task Bar

2.1 - Folder

2.1.1 CREATING AND EDITING LOGICAL GROUPS

Logical groups are made up of input points, output points and parameters which are defined by their addresses on the controller. They are displayed on the screen as groups of points that have a functional relationship.

Select the GROUPS icon to bring up the following screen entitled *Groups Menu*, (see *figure 2.03*). This list will appear blank when used for a new system.

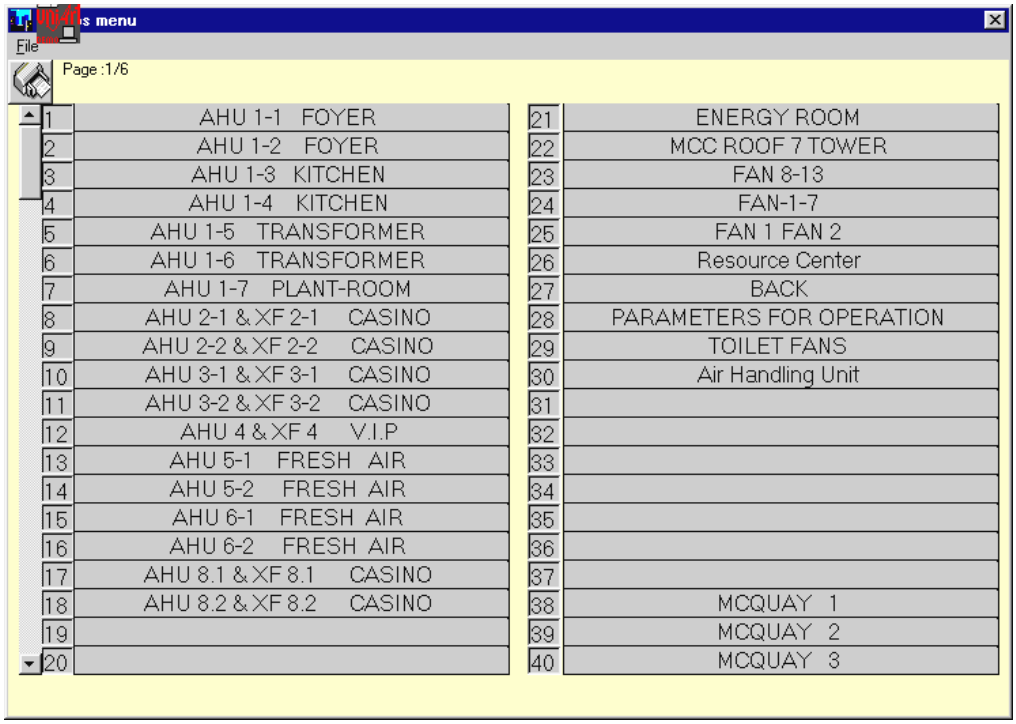


Figure 2.03 – Groups Menu

To edit any of the lines in the *Groups Menu*, place the cursor over the line and click on the right mouse button. The following box should appear, (*Figure 2.04*).

Figure 2.04 – Edit menu box

2.1.2 GROUP PROPERTIES

Select **Group Properties** in the *Edit Menu box*, (*figure 2.04*) to make the box in *Figure 2.05* appear.

NOTE: This box will appear blank, as in *figure 2.05*, if the line is not in use.

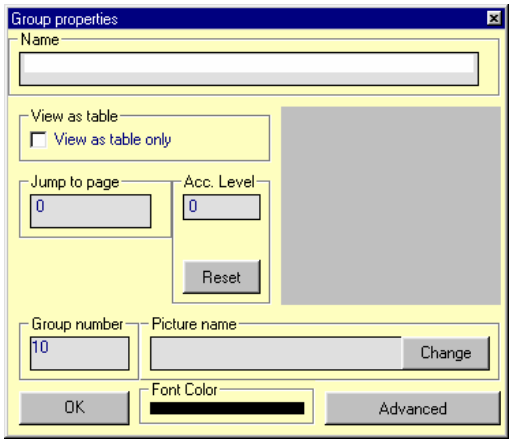


Figure 2.05 – Group properties

Name: Give a name to the group, eg. A/C No.1.

Group Number: Line number in *Groups Menu box*.

Acc. (access) Level: to be assigned by the supervisor to limit access to displaying group data.
Reset will return all levels to their default as defined in *Chapter 9 – Settings*.

Picture Name: Press the **change** button to select an image either from Control Applications Ltd.'s library, user's library or another source. This will serve as background picture for the displayed group.

Jump to page: enables the user to 'jump' straight to a defined page by double-clicking on that line in the *Group Menu*. This allows for easy access to pages when the user is working with many pages.

View as table: Can view data as a table rather than a picture.

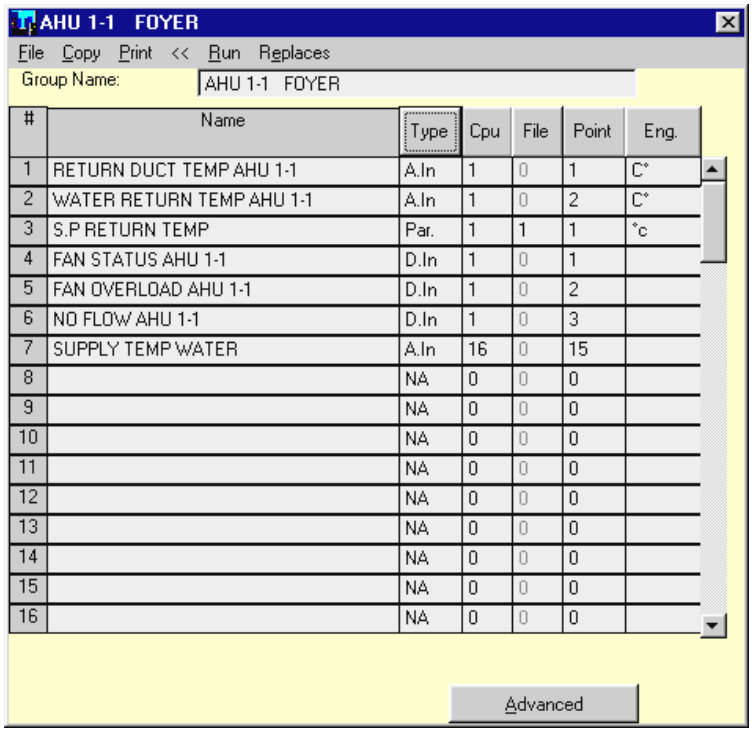
Font Color: to change the color of the group name.

Advanced: for Control Applications Ltd. personnel only.

2.1.3 EDIT

The user creates groups in his/her own logical manner so that the points on site can be viewed from his/her computer.
Each group represents a collection of points, (for example these can be points of a specific device or a zoom).

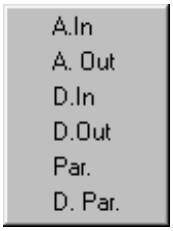
Choose a blank line in the *Group Menu* (*Figure 2.03*) and select **EDIT** from the *Edit Menu box* (*figure 2.04*).
For this example, Line 1 the AHU 1-1 Foyer, has been chosen.



#	Name	Type	Cpu	File	Point	Eng.
1	RETURN DUCT TEMP AHU 1-1	A.In	1	0	1	C°
2	WATER RETURN TEMP AHU 1-1	A.In	1	0	2	C°
3	S.P RETURN TEMP	Par.	1	1	1	°c
4	FAN STATUS AHU 1-1	D.In	1	0	1	
5	FAN OVERLOAD AHU 1-1	D.In	1	0	2	
6	NO FLOW AHU 1-1	D.In	1	0	3	
7	SUPPLY TEMP WATER	A.In	16	0	15	
8		NA	0	0	0	
9		NA	0	0	0	
10		NA	0	0	0	
11		NA	0	0	0	
12		NA	0	0	0	
13		NA	0	0	0	
14		NA	0	0	0	
15		NA	0	0	0	
16		NA	0	0	0	

Figure 2.07 – Edit Group Menu

i. Fill in the name of the group in the **Group Name** box.
ii. Fill in the **Name** of each point, one per line.
iii. Click on the desired line in the **Type** column and a menu box will appear (see *figure 2.08*) for easy selection of I/O configuration.



A. In = analog in
A. Out = analog out
D. In = digital in
D. Out = digital out
Par. = parameter
D. Par. = digital parameter

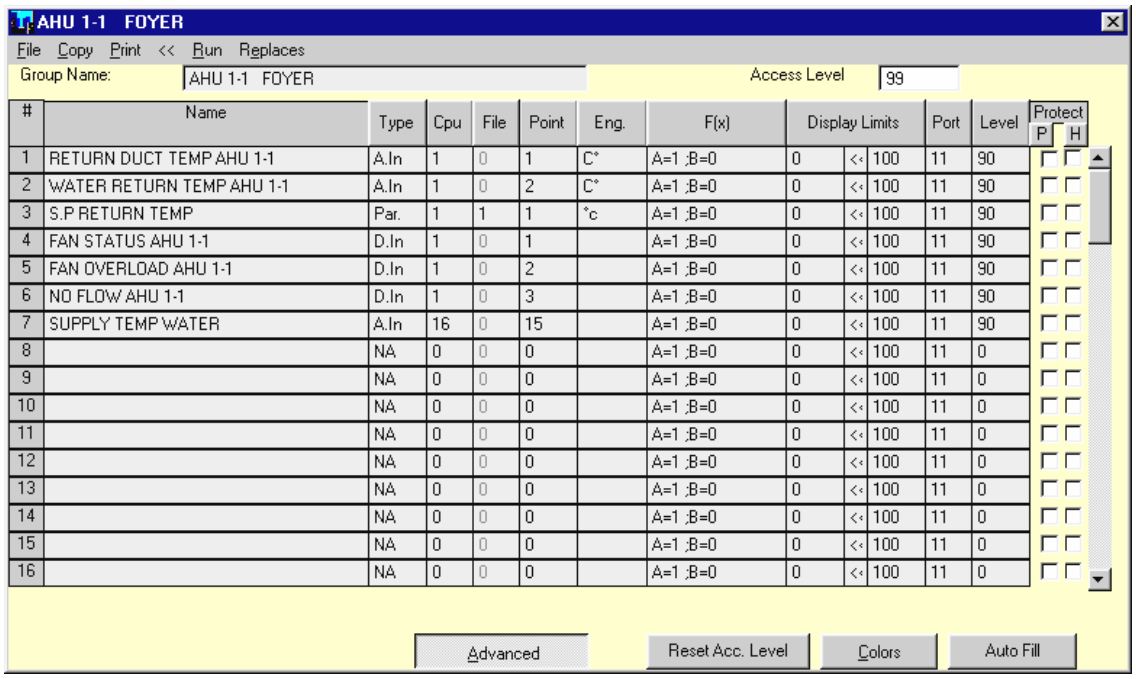
Figure 2.08– I/O configurations

iv. Click on the desired I/O point to select.
v. Fill in the **CPU** column with the number of the controller.
NOTE: groups may include points from more than one controller.
vi. The **File** column refers to the program associated with the point. This is only relevant when the point is defined as a parameter (Par.).

vii. **Point** refers to the number of the I/O point.
NOTE: OUT points are numbered n (1-32) and IN points are numbered n+50 (51-83).

viii. **Eng.** refers to the engineering unit.
Select the suitable unit where relevant by clicking on the desired line and choosing one of the options that appear in the menu box.
NOTE: Digital points will not need this.

The **Advanced** button at the bottom of the screen enables the user to access additional editing options (*Figure 2.09*).



#	Name	Type	Cpu	File	Point	Eng.	F(x)	Display Limits			Port	Level	Protect P	Protect H
1	RETURN DUCT TEMP AHU 1-1	A.In	1	0	1	C°	A=1 ;B=0	0	<<	100	11	90		
2	WATER RETURN TEMP AHU 1-1	A.In	1	0	2	C°	A=1 ;B=0	0	<<	100	11	90		
3	S.P RETURN TEMP	Par.	1	1	1	°c	A=1 ;B=0	0	<<	100	11	90		
4	FAN STATUS AHU 1-1	D.In	1	0	1		A=1 ;B=0	0	<<	100	11	90		
5	FAN OVERLOAD AHU 1-1	D.In	1	0	2		A=1 ;B=0	0	<<	100	11	90		
6	NO FLOW AHU 1-1	D.In	1	0	3		A=1 ;B=0	0	<<	100	11	90		
7	SUPPLY TEMP WATER	A.In	16	0	15		A=1 ;B=0	0	<<	100	11	90		
8		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
9		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
10		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
11		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
12		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
13		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
14		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
15		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		
16		NA	0	0	0		A=1 ;B=0	0	<<	100	11	0		

Figure 2.09 – Edit group menu-extended

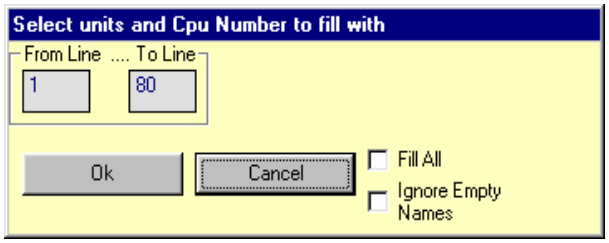
The **Access Level** box in the top right hand corner of the screen allows the user to choose an access level for the group. Once an access level has been selected the user will be required to enter a password in order to access this editing option, (see *Chapter 2.6 – Password Settings* for more details).

Access levels may also be established for each point in the column headed **Level**.

Reset Acc. Level:
There are two columns entitled **Protect**:

- Ticking the left boxes (**P**) will lock the specific points so that the data may not be changed.
- Ticking the right boxes (**H**) will hide the specific points on any graphic display of the system.

Click on the titles of the columns (eg **Type** or **CPU**) to make the boxes in *figures 2.10 and 2.11* appear. These boxes allow the user to fill in the same value for many lines as oppose to one at a time.

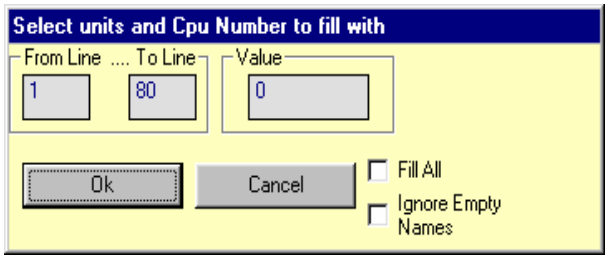


- Click on **Type, Eng. and F(x)** to make the box in *figure 2.10* appear.
- Type in the lines you would like to fill.
- Click OK

Figure 2.10– Type/Eng./F(x) value box

- For **Type**, a menu box with I/O point options will appear.
- Define the same I/O point for all chosen lines.

- Click on **CPU, File, Points, Port, Level and Display limits** so the box in *Figure 2.11* appears.



- Select the lines you would like to fill and place number in the **Value** box, (for **Display Limits** select min. and max. value).
- Press OK.

Figure 2.11- CPU/File/Points/Port/Level/Display limits value box

*For **Port** address see Appendix A.*

Fill All: to include <u>all</u> lines that you have selected. If this option is <u>not</u> chosen all lines with the value of zero will remain with a value of zero.

Ignore Empty Names: lines that have not been named will not be altered.

Clicking on any line under the **F(x)** column will make the box in *Figure 2.12* appear.

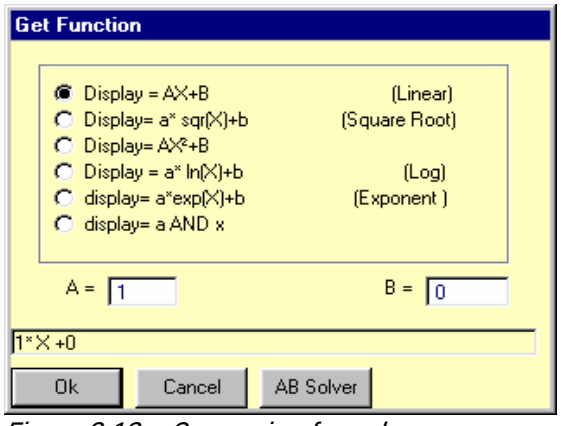
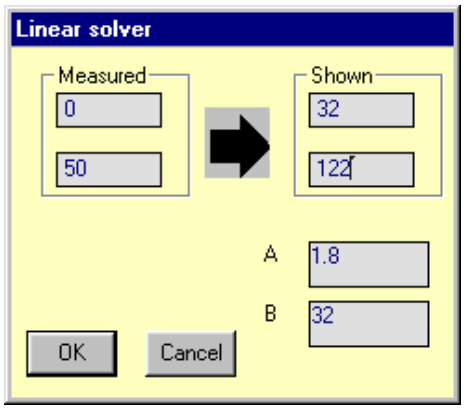


Figure 2.12 – Conversion formulae

This box enables the user to define the A/B values and to convert the units measured by the controller to those to be displayed on the PC (UniArt).

The **AB Solver** button converts measured units to displayed units (eg., °C to °F or V to ppm).



Eg.) Converting °C to °F

- Enter 0 and 50 in the **Measured** boxes,
  (the controller measures temperatures between 0-50°C).
- Enter the equivalent converted measurements in the **Shown** boxes, (32°F and 122°F).
- The AB Solver immediately shows values A=1.8 and B=32.

Figure 2.13 – Linear Solver

The **Auto Fill** button brings up a screen (*Figure 2.14*) that allows you to fill in all of the columns for multiple lines.

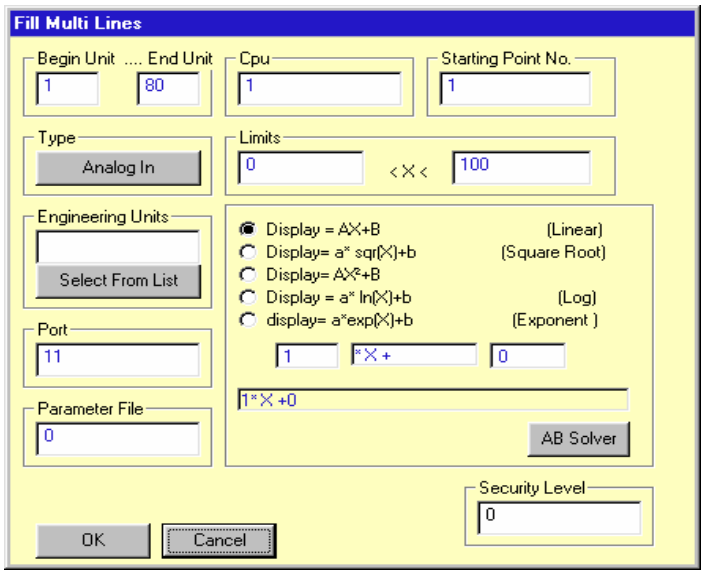


Figure 2.14 – Fill Multi Lines

The **Colours** button gives you the option to colour the displayed parameters. Pressing this button again returns you to the regular screen.

Colour options:

High Value: any value greater or equal to the chosen number will display the chosen colour.

Disp. **High:** text to be displayed when the value is higher than the high value.

Disp. **Inter.:** text to be displayed when the value is between the high and low values.
Low Value: any value lower than the chosen number will display the chosen colour.
Disp. **Low:** text to be displayed when the value is lower than the low value.

Disp. **Format:** uses a box similar to that in *figures 2.10 and 2.11* allowing you to choose the format that you want values to be displayed in.

Use #'s and/or 0's to set the display format.
#: keeps the place of a number to be displayed
0: places 0 where there is no number

Eg.) ####.### = 234.56
0000.000 = 0234.560
#.# = if the value here is zero nothing will be displayed
0.0 = 0.0
Time can be displayed HH:MM

Edit Group Menu Toolbar:

Figure 2.15 – Group Menu Toolbar

Press **FILE** to bring up the following sub-menu.

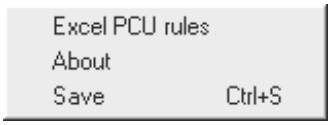


Figure 2.16 – File sub-menu

EXCEL PCU RULES: Use for Control Applications Ltd. personnel only.
ABOUT: Information about the UniArt version that you are using.
SAVE: standard save feature.

Press **COPY** to bring up the following sub-menu.

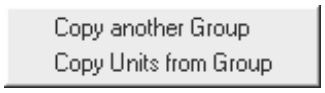


Figure 2.17 – Copy sub-menu

COPY ANOTHER GROUP: to copy a complete group to current group.
COPY UNITS FROM GROUP: copies units (at least 2) from another group to the current group.

Press **REPLACES** to bring up the following sub-menu.

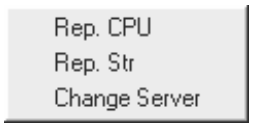


Figure 2.18 – Replaces sub-menu

REP. **CPU:** allow you to change the CPU definition.
REP. **STR:** allows you to replace a word(s) with another word(s).
CHANGE SERVER: allows you to change the communication server.

PRINT and **RUN** to be used as in other programs.

2.1.4 EDIT GRAPHICS

Select **Edit Graphics** option from *Edit Menu box* (*Figure 2.04*). You will be asked to enter a password. If a picture was chosen in the Group Properties box (*Figure 2.05*) the screen will appear with that picture and a list of the I/O points in the top left corner. Now you have to drag these points to their relative place on the picture. This has been done in *Figure 2.19*.
If no picture was chosen the screen will appear blank with a list of I/O points and the picture can be chosen from here.

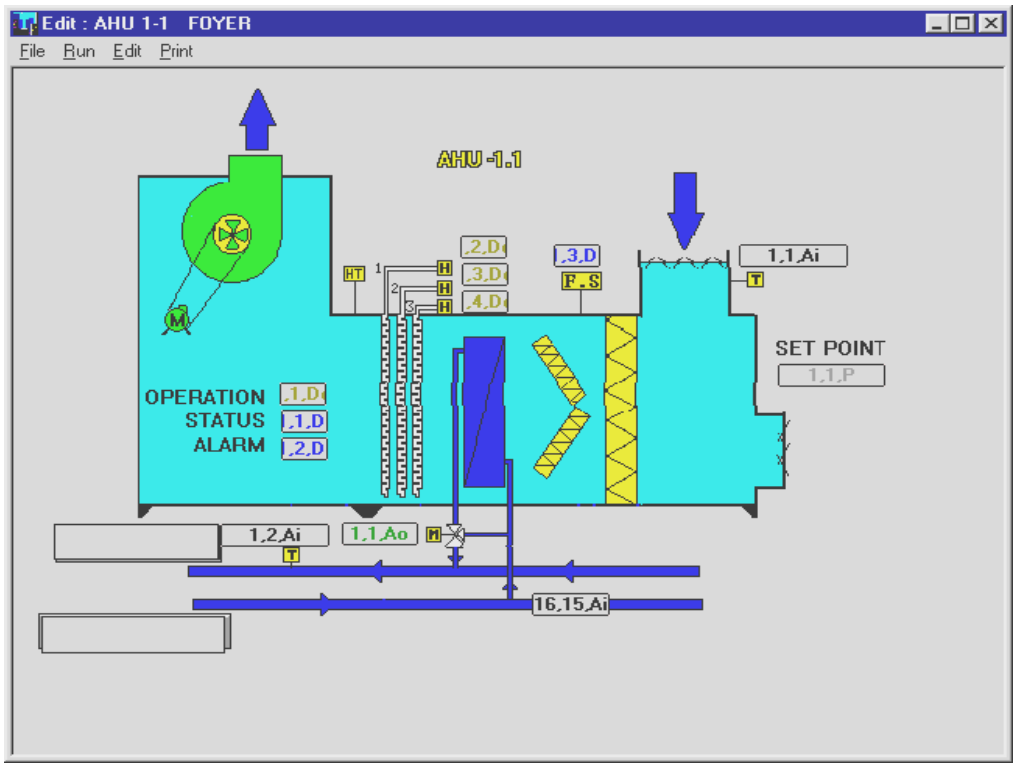


Figure 2.19 - Edit Graphics

Figure 2.20 – Group Properties sub-menu

GROUP PROPERTIES: opens box in *Figure 2.05*.

SEARCH UNIT: enables you to find units easily. You will have the following options for each point once clicking here.

- **Reset:** Clicking on this button will make the point on the diagram turn red and return to the top left corner.
- **Undo Size:** Clicking on this button will return the point to it's original size.
- **Search:** Clicking on this button will make the point turn red.

ADD UNIT: makes the box in *Figure 2.21* appear. Fill in the required unit properties.

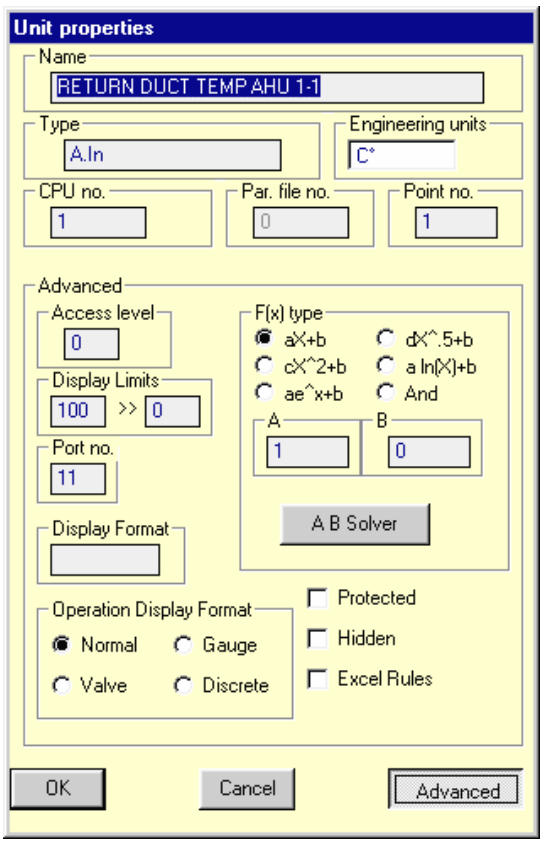


Figure 2.21 – Unit properties

The **Advanced** button, depressed here, allows the following options:

Access level: to choose an access level for the point.
Port number: see *Appendix A*.
Display Limits: to choose the format in which the point is to be displayed (see page 20 for examples).
F(x) type: conversion formulae and definition of A/B values.
Operational Display format (how to display the units)**:**
Normal (sliding gauge), **Valve**, **Gauge** or **Discrete** (option to set three buttons representing 3 values).
Protected: lock the point so that the data cannot be altered.
Hidden: hide the point in any graphic display.
Excel Rules: for use within Israel only.

ADD ZOOM: makes the box in *Figure 2.22* appear.

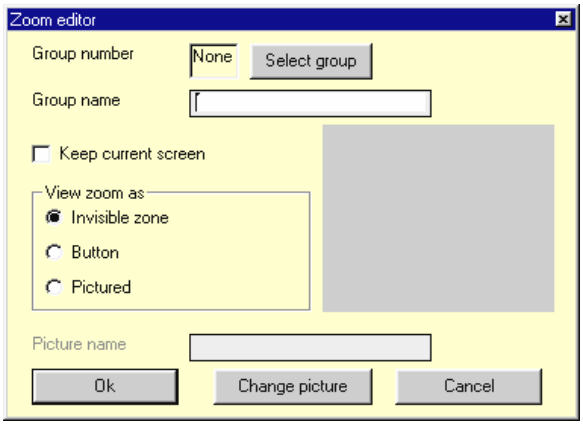


Figure 2.22 - Zoom Editor

The Zoom feature is a means of linking related pages allowing you to jump between them for easy access.

Press **Select Group** to make the *Groups Menu* (*figure 2.03*) appear.
Double-click on the group that you want to jump to from this page and choose how you would like the zoom to be displayed.
If you wish to view the zoom as a picture, choose a related picture from your file by pressing on the **Change picture** button.

ADD LABELS TO ALL UNITS: makes the name of the points appear.
RESET UNIT SIZE: resets the sizes of all units to the default.
RESET ALL UNITS: resets the sizes of all units and returns them to their original position.
RESET LEVELS: resets the access levels for the units to zero.
SNAP TO GRID: you will have to enter a number for the vertical and horizontal axes. The number that you enter is the number that the screen is divided by, eg) if you enter 10 for the horizontal resolution, the screen is then divided into 10 columns. All points are then placed in the top left hand corner of closest cell.

The points are displayed on the diagram in the format CPU, Point, Type, eg., 1, 1, Ain.
Click with the right mouse button on any of the points on the diagram to change the properties of that particular point. The menu in *Figure 2.23* will appear.

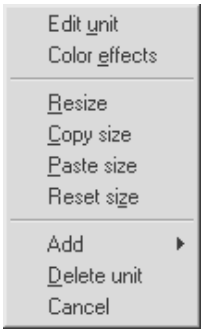


Figure 2.23 – Edit Unit

EDIT UNIT: allows you to edit the properties of individual units.

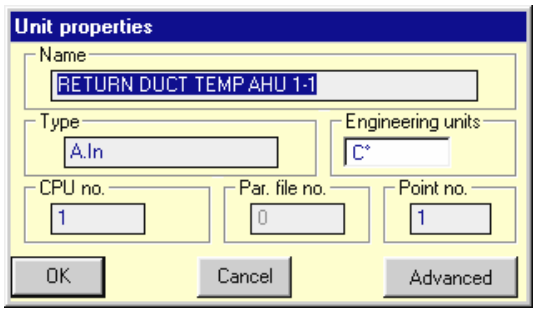


Figure 2.24 – Unit properties for 1, 1, Ai.

(for **Advanced** settings see explanation of *Figure 2.21*).

COLOR EFFECTS: click to make the box in *Figure 2.25* appear.

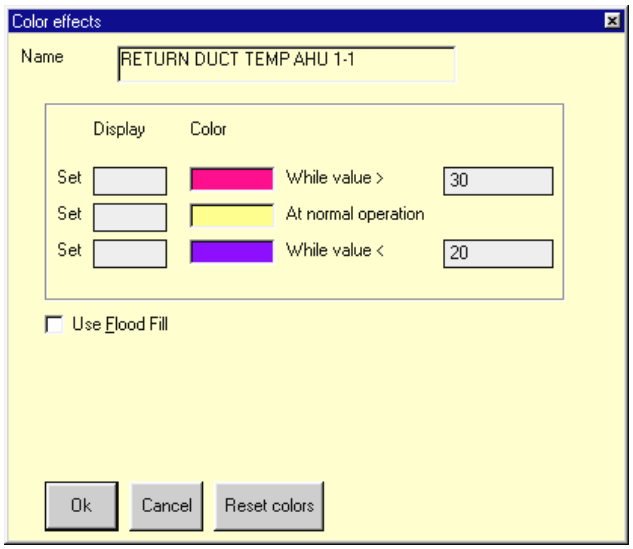


Figure 2.25 – Color effects for 1, 1, Ai.

- Enter normal operating values in the two boxes on the right.
- Under **Display** enter the text that you would like to appear when the value is less than desired, at normal operation and more than desired.
- One click in the boxes under **Color** will make a regular colour palette appear. Choose colours for the relevant operating levels.
- **Use Flood Fill** gives you the option to fill an area with a solid black outline with a particular colour. Select if you would like the area to flash by placing a tick in the **Blink** box. To activate press **Select Area**. This will return you to the editing screen. Click on the area to be filled. This area will flash to show that it has been selected. Click on the right mouse button to return to the box in *Figure 2.25* and press OK.

NOTE: - **Reset colors** will make all values and colours return to default.

Eg., (1, 1, Ai)
Normal operating levels are between 20°C and 30°C.
When the value is greater than 30°C it will display red, when the value is less than 20°C the point will be blue and when it's operating within the normal range the point will be yellow.

RESIZE: allows you to change the size of the point by dragging the arrows in the corners of the box.
COPY SIZE and **PASTE SIZE:** allows you to copy the size of a specific point and then paste it in another place on the diagram.
RESET SIZE: changes the size back to default.
ADD: place cursor on arrow to the right. The following sub-menu will appear.

Figure 2.26 – Add sub-menu

ADD VESSEL: click so the box in *Figure 2.27* appears.
This option allows you to add a vessel such as a tank or boiler to your diagram.

Choose the colour of the area that is already filled (**Fill color**) and the area that is not filled (**Not filled color**).

Select the direction you would like the vessel to be filled (**Filling direction**). Values will be filled in automatically for filling L to R, R to L, top to bottom or bottom to top.

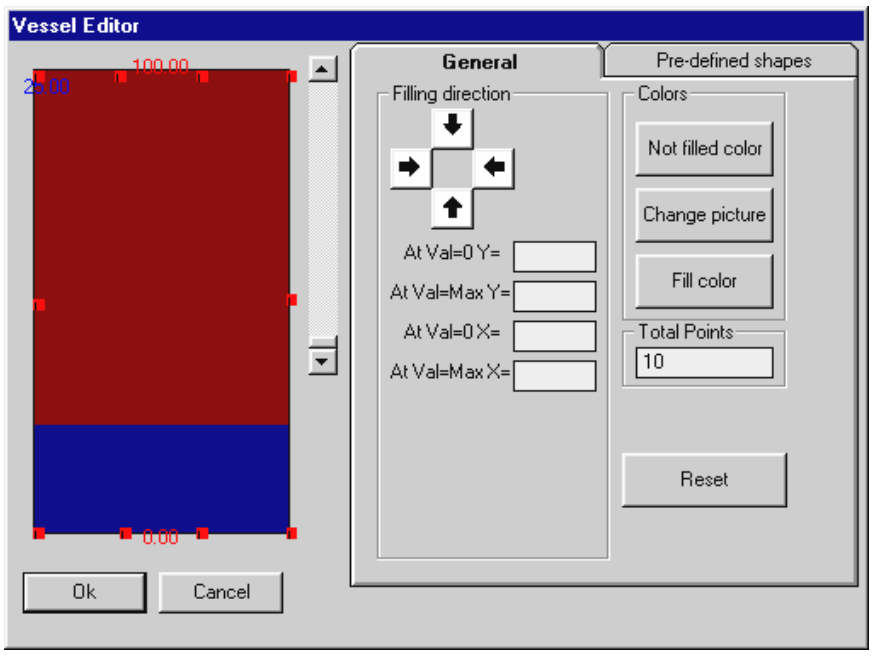


Figure 2.27 – Vessel Editor

Move the scroll bar to check the filling direction.
If you wish that the vessel be filled at an angle fill in the values manually.

Total Points indicates the number of red points that are located on the diagram to the left. These points may be dragged to change the shape of the vessel.

Reset returns all values to their default.

ADD GAUGE: This option allows you to add a gauge to the diagram.

- click **Add Gauge** so the box in *Figure 2.28i* appears.
- choose a suitable gauge.
- choose knobs and hands.

- Click **Colors/Values** option so the box in *Figure 2.28ii* appears.
- Choose **value color** (current value), **scale color** (numbers on the scale), **knob plate color** (knobs) and **background picture** (from file).

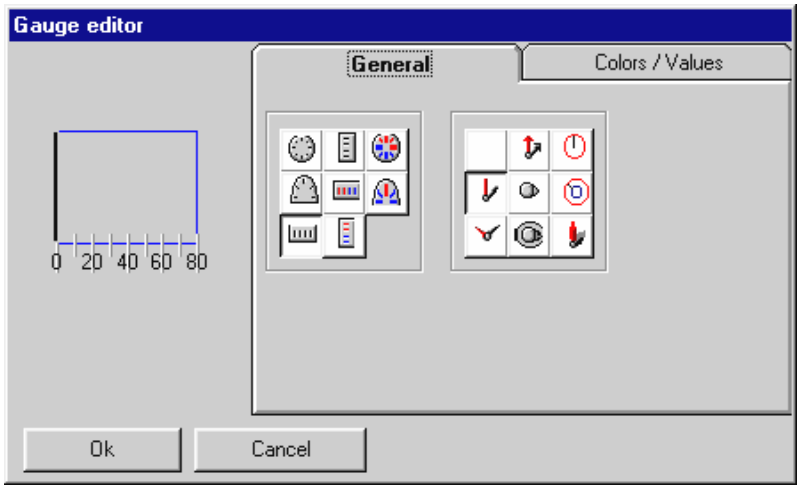


Figure 2.28i – Gauge Editor-general

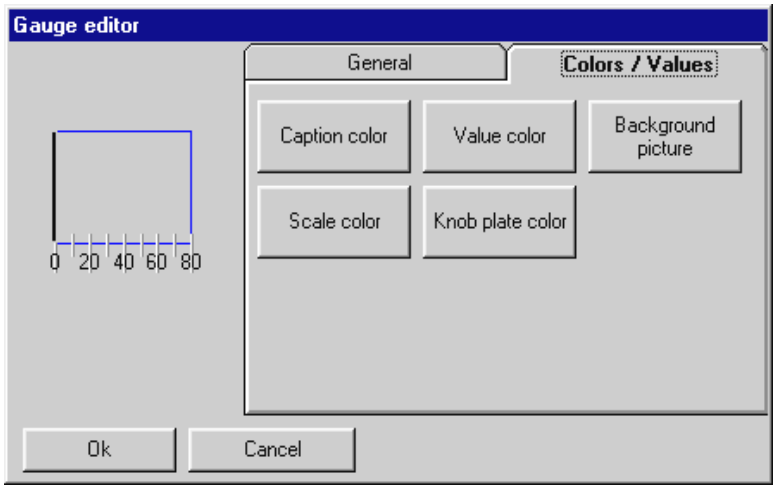


Figure 2.28ii – Gauge Editor-Colors/Values.

ADD ANIMATION: click to make *Figure 2.31* appear.

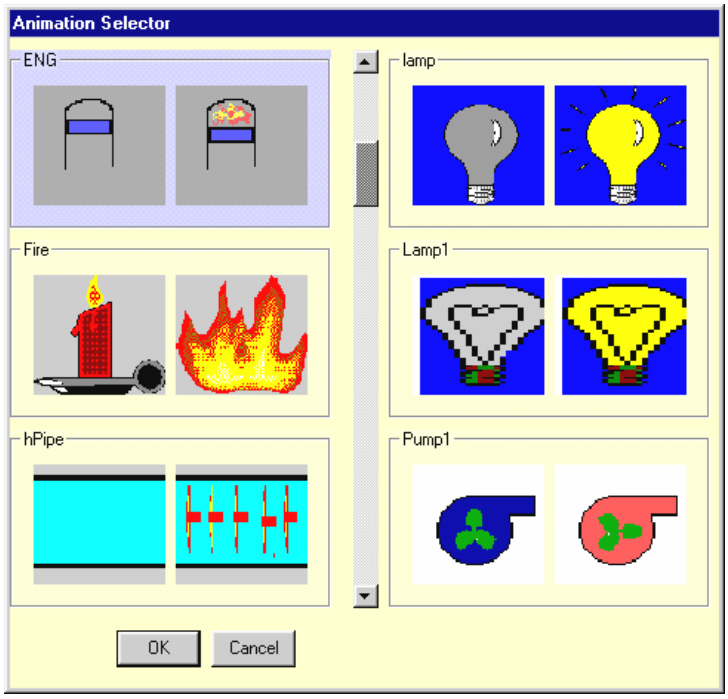


Figure 2.31 – Animation Selector.

Select the appropriate picture to be added to the point by clicking on it and then on OK.
The picture will appear in the top right corner of the screen and can be dragged using the mouse to it's desired position.
NOTE: some of the objects have parts that move either clockwise or anti-clockwise.

Place the cursor on the picture and click once with the right mouse button. This will enable you to **Edit**, **Find Unit**, **Resize**, **copy size**, **paste size** and **delete animation**.

ADD SLIDER: allows you to add a slider to your diagram.

Styles (*Figure 2.29i*):

- Choose slider direction eg., up/down or left/right – **Slider direction**.
- Choose the **Frame style**.
- Choose scale to be above/below or to left/right of the bar – **visible scale**.
- Choose **Inverse Direction** to change the direction of the slider.

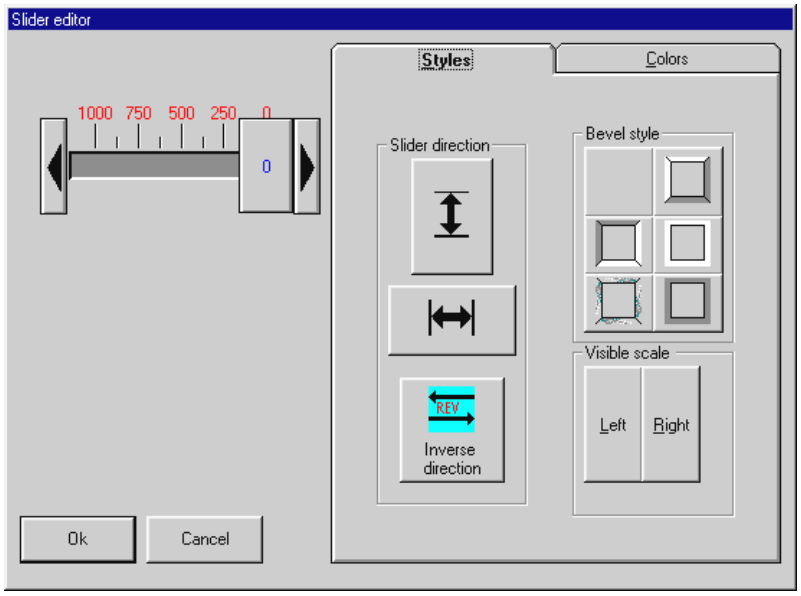


Figure 2.29i – Slide Editor – general

Colors (*Figure 2.29ii*):

- Choose **value color** (current value), **scale color** (numbers on the scale), **knob color** (knobs), **back color** (background colour), **frame bright color** and **frame shadow color** (two colours of the frame).

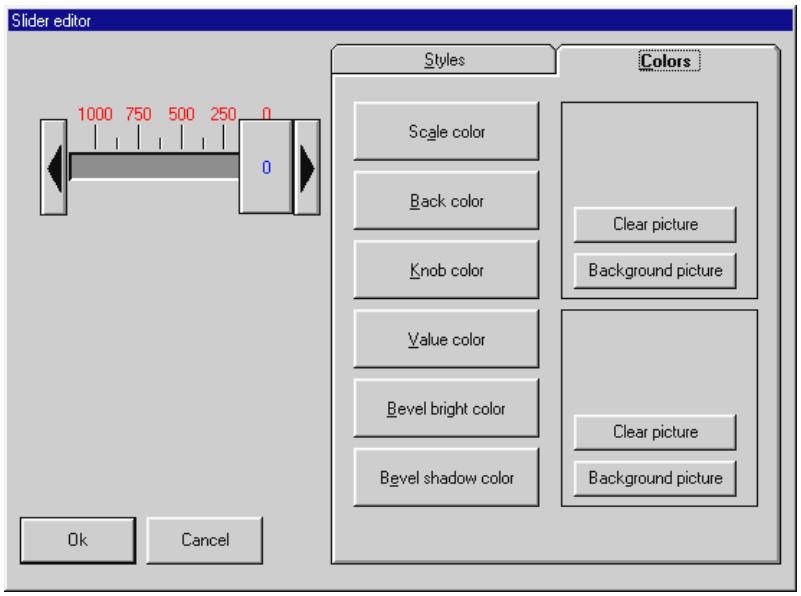


Figure 2.29ii – Slide Editor - Colors

ADD LABEL: enables you to add a label to any point.

Allows you to add a label to any point.

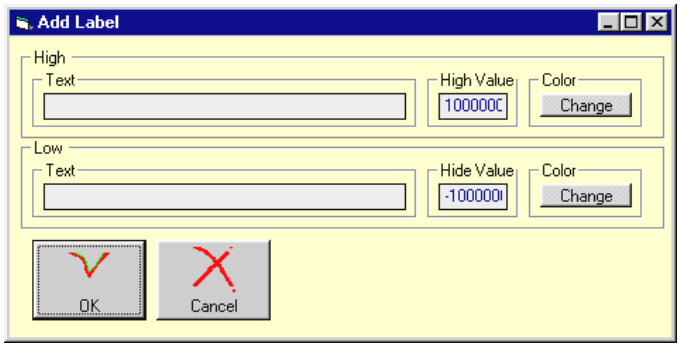


Figure 2.30 – Add label

- **High Text** will appear when the value is higher than the **High Value**.
- **Low text** will appear when the value is between the **High Value** and **Hide Value**.
- Values lower than the **Hide Value** will be hidden.
- Select desired colours.

ADD REAL TIME GRAPH: enables you to add a line graph to track the progress of certain points, (usually analog).
After adding graph press **run** to activate.

DELETE UNIT: to remove the unit.
CANCEL: standard cancel function.

Toolbar:

Figure 2.32 – Edit Group Menu Toolbar

Press **FILE** for the following options:

SAVE: normal save function
RESTORE: will restore all data changed since last save.
EXIT: to leave the edit page.

Press **PRINT** and **RUN** to be used as in other programs.

Press **EDIT** for the *Group Properties sub-menu*, as in *Figure 2.20*.

2.1.5 EDIT GROUPS

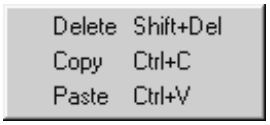


Figure 2.33 – Edit groups sub-menu

Select **Edit Groups** option from *Edit Menu box* (*Figure 2.4*) to bring up the box in *Figure 2.33*.
This menu allows you to **delete**, **copy** and **paste** groups.

2.1.6 RUN MODE

Double click on any line in the *Groups Menu* in *Figure 2.03* to run that particular group. Alternately, you can get to this screen via the **Run** command on the *Edit Group Menu toolbar* in *Figure 2.15*.

Click with the right mouse button on any point to make the following menu appear.

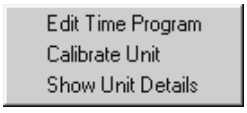
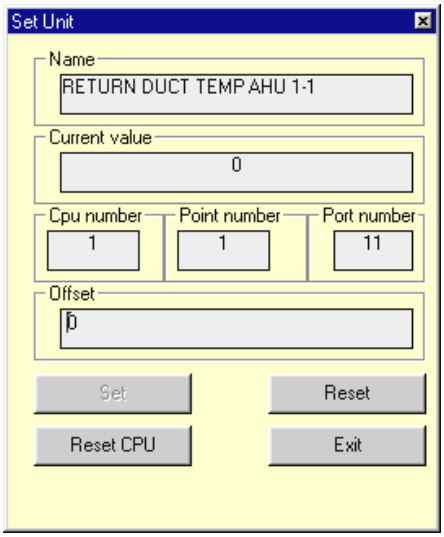


Figure 2.34– Point Menu

EDIT TIME PROGRAM: Selecting this option will make the *Time Program Editor* in *Figure 2.34* appear. See *Chapter 2.5.04* for details on setting time programs.

CALIBRATE UNIT: Select this option to make the box in *Figure 2.35* appear.



This option allows you to make fine adjustments to each point for optimal functioning.

Figure 2.35 – Set Unit

Current Value: the displayed value.
Enter **CPU/Point** and **Port** numbers (*For **Port** address see Appendix A).*
Offset: the difference between the real value and the displayed value.
Reset: to reset the last calibration.
Reset CPU: to reset all the points. For Control Applications Ltd. personnel only!!
Exit: to leave this screen.

SHOW UNIT DETAILS: select this option to make the box in *Figure 2.36* appear.

A description of each text box can be found in *Chapter 2.1.3*.

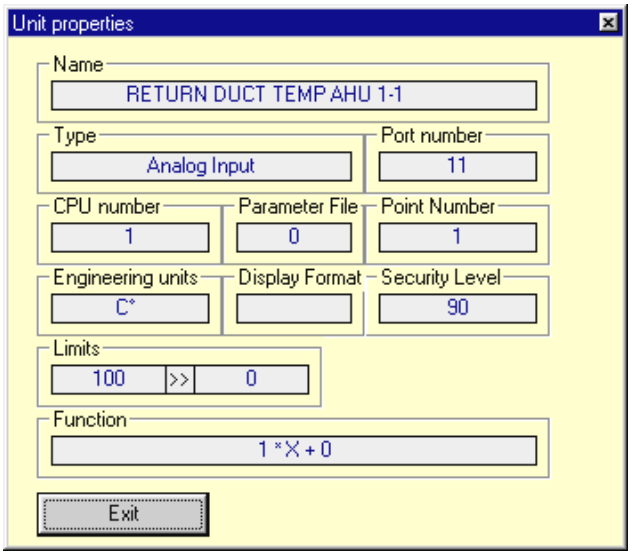
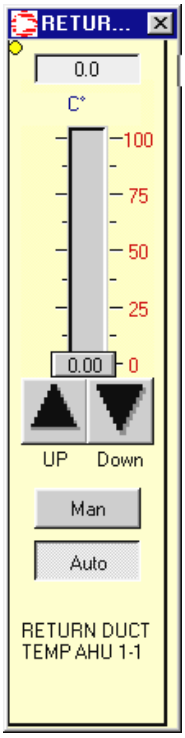


Figure 2.36 – Unit Properties 2



Double-click on any analog point or parameter to make the slider in *Figure 2.37* appear.

This enables you to manually change the value of the point.

Figure 2.37 – Analog Value Slider

Double click on any digital point to make the following window appear.

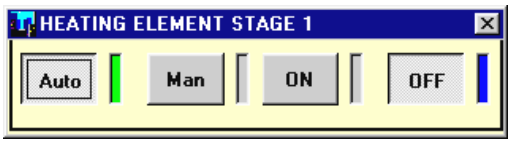


Figure 2.38 - Digital Value buttons

This window allows you to turn a particular point on or off.

NOTE: The point on the graphic display turns yellow when manually adjusted. The toolbar in run mode appears as follows:

Figure 2.39 – Run Mode Toolbar

Slide: Press this button and then resize the window to place scroll bars at the right and bottom. The window can also be resized by dragging it's corners, but data may be omitted if the screen is reduced too much.

Edit: returns you to *Edit Graphics* screen in *Figure 2.19*.

Sound: Play: to play any prerecorded messages.
Record: opens a standard Windows recorder and can be used to record messages eg) explanation of the system.

Clicking on the back arrow returns you to the last screen you visited.

2.2 - Alarms

The second icon on the vertical task bar represents the Alarm Manager. This option will enable you to create and monitor alarms. Click on the icon to bring up the box in *Figure 2.40.*

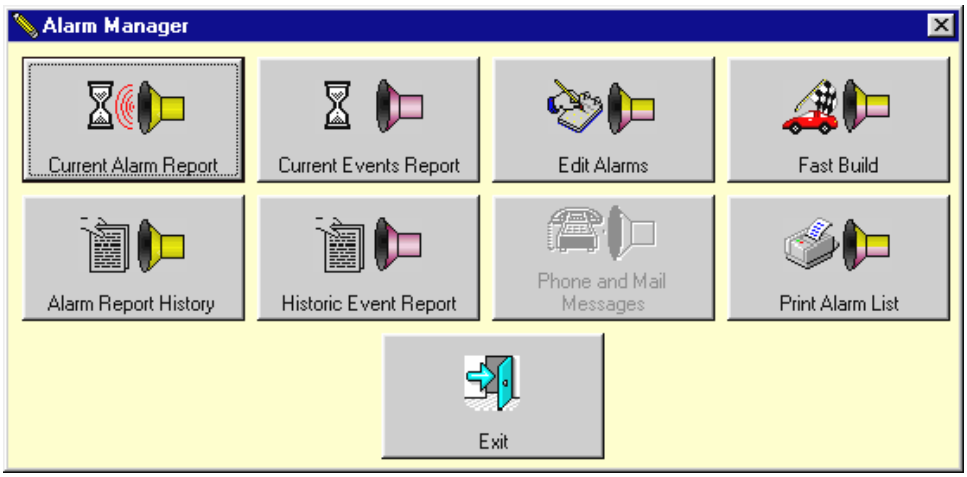


Figure 2.40 – Alarm Manager Menu

2.2.1 CURRENT ALARM REPORT

Press the **Current Alarm Report** button in *Figure 2.40* to make the box in *Figure 2.41* appear.
This screen allows you to see all current alarms, including those that have been acknowledged but not yet fixed.

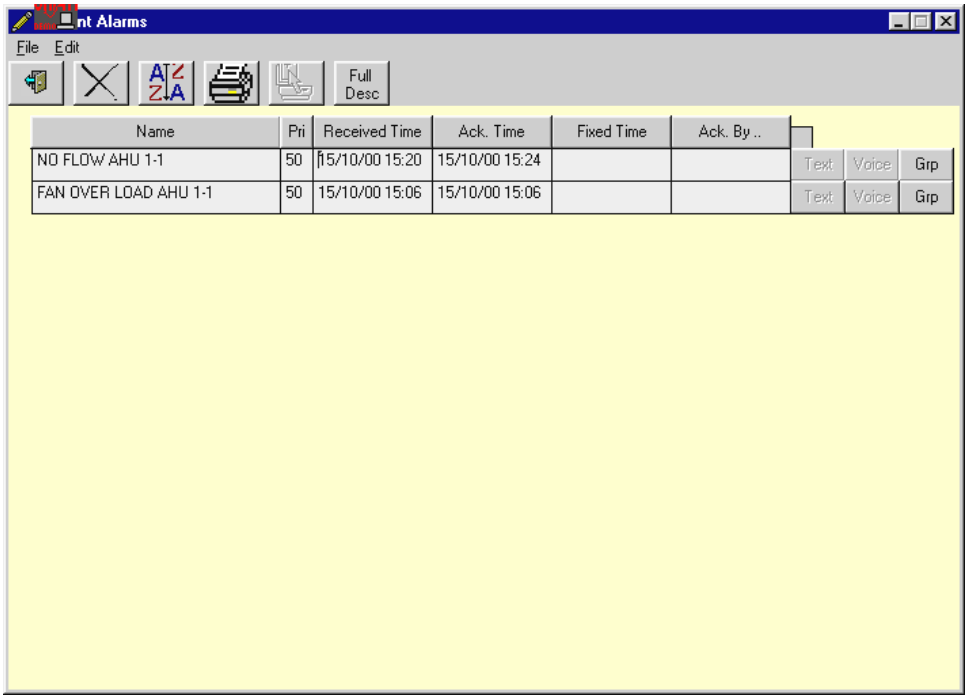


Figure 2.41 – Current Alarms Report

Name: name of the alarm.
Priority: determines the level of priority for reporting alarms. This number ranges between 1-99 (where 99 has the highest priority level).
Received Time: displays the date and time that an alarm was received.
Ack. Time: displays the date and time that the alarm was acknowledged.
Ack. By: the name of the person who acknowledged the alarm will appear here if an access level and password were required to acknowledge the alarm.

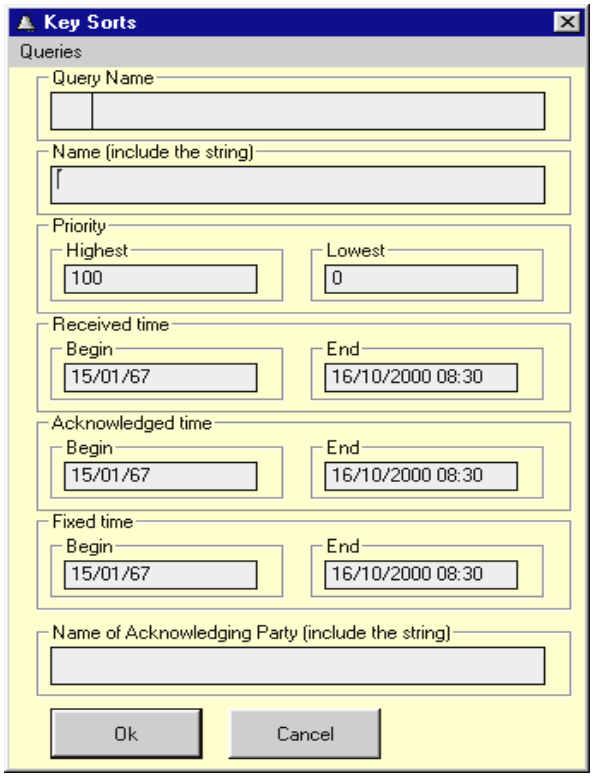
The following options allow you to display the alarm messages in different ways:
Text/Show Msg: makes text message appear. Eg, text may be instructions as to what to do when that specific alarm is ringing.
Voice/Play Msg: plays sound/voice message.
Grp: runs the group in which the current alarm is located.

Current Alarm Report Toolbar:

The toolbar is located above the Alarm Report table.

1. The first button on the left shows a door allowing you to **exit** the screen.

2. The second button to the left allows you to **delete** the alarm. This option is for debugging and testing purposes only. You will be required to enter a password for Access Level 100 (Control Applications Ltd. personnel only).



3. The third button is used to **sort** alarms or **search** for a particular alarm. Press this button or the word **Sort** on the toolbar to bring up the screen in *Figure 2.42*.

Alternately, clicking on the headings of each column in the *Current Alarms Report* will sort the data in either ascending or descending order.

Figure 2.42 – Key Sorts

Query name: enter part of the alarm name to search.
Name: full name of the alarm.
Priority: sort the data by priority level.
Received time: sort data by the time the alarm was received.
Acknowledged time: sort the data by the time the alarm was acknowledged.
Fixed time: sort the data by the time that the alarm was fixed.
Name of acknowledging party: find the alarm by the name of the person who acknowledged it.

4. To **Print** press the fourth button or enter **Print** via **File** on the toolbar.

5. For use by Control Applications Ltd. personnel only.

6. **Full Desc.:** allows the full name description to be displayed by removing the Priority and Received Time columns.

2.2.2 CURRENT EVENTS REPORT

Pressing on this button will make a screen similar to that in *Figure 2.41.* They differ in that here current events are reported not current alarms. When an alarm goes off it will be reported immediately by flashing on your screen. When an event occurs it will be listed in this table but will not pop up on the screen.

2.2.3 EDIT ALARMS

Click on this button to make the following box appear. Note that the **Advanced** button on the bottom of the screen has been pressed to display additional options.

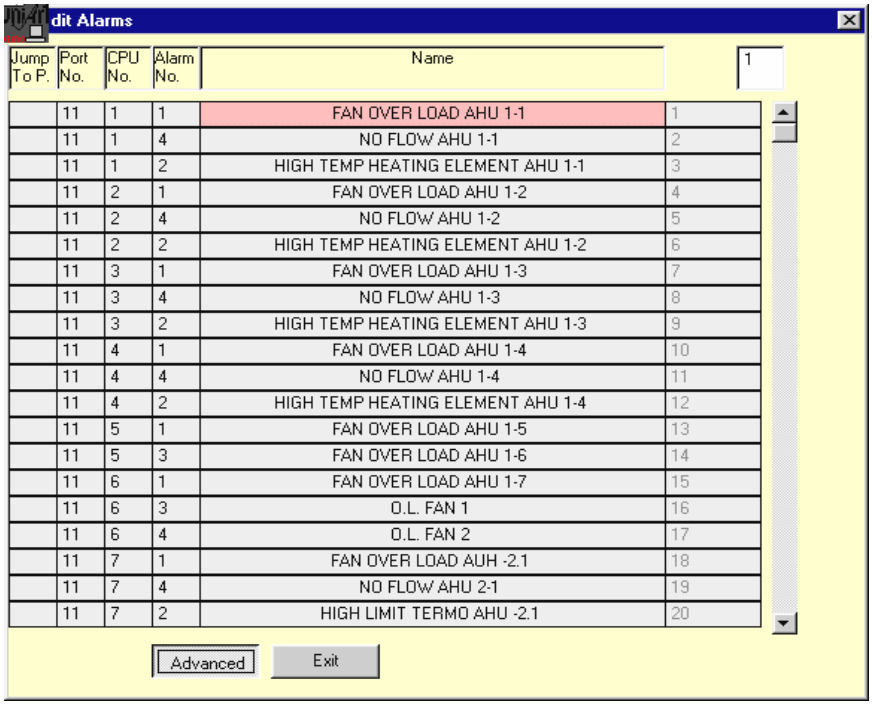

dit Alarms
Jump To P.
Port No.
CPU No.
Alarm No.
Name
1
11 1 1 FAN OVER LOAD AHU 1-1 1
11 1 4 NO FLOW AHU 1-1 2
11 1 2 HIGH TEMP HEATING ELEMENT AHU 1-1 3
11 2 1 FAN OVER LOAD AHU 1-2 4
11 2 4 NO FLOW AHU 1-2 5
11 2 2 HIGH TEMP HEATING ELEMENT AHU 1-2 6
11 3 1 FAN OVER LOAD AHU 1-3 7
11 3 4 NO FLOW AHU 1-3 8
11 3 2 HIGH TEMP HEATING ELEMENT AHU 1-3 9
11 4 1 FAN OVER LOAD AHU 1-4 10
11 4 4 NO FLOW AHU 1-4 11
11 4 2 HIGH TEMP HEATING ELEMENT AHU 1-4 12
11 5 1 FAN OVER LOAD AHU 1-5 13
11 5 3 FAN OVER LOAD AHU 1-6 14
11 6 1 FAN OVER LOAD AHU 1-7 15
11 6 3 O.L. FAN 1 16
11 6 4 O.L. FAN 2 17
11 7 1 FAN OVER LOAD AUH -2.1 18
11 7 4 NO FLOW AHU 2-1 19
11 7 2 HIGH LIMIT TERMO AHU -2.1 20
Advanced
Exit

Figure 2.43 – Edit Alarms

Name: name of alarm.
Alarm Number: number of alarm.
CPU Number: number of CPU.
Port Number: number of communication server/location of controller on the network, (*for **Port** address see Appendix A.*)
Jump to page: which page to jump to.

Double click on any of the alarms to make the following box appear. Here you will be able to edit the alarm properties.

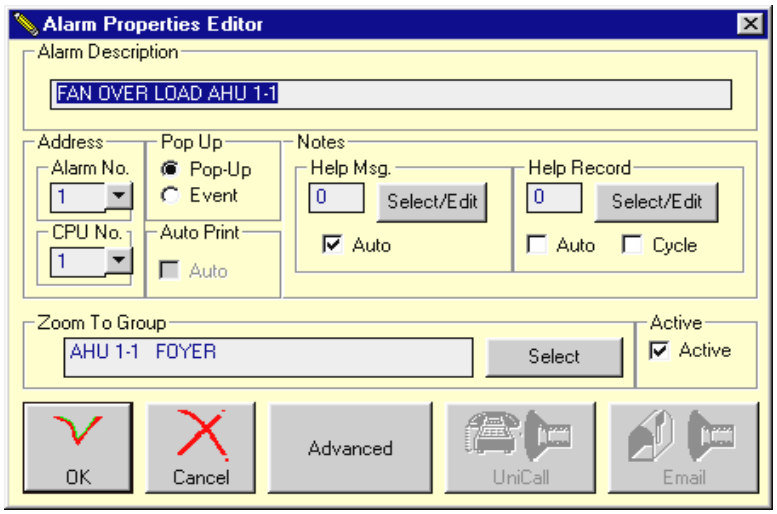


Figure 2.44 – Alarm Properties Editor

Alarm Description: name of the alarm.
Address: includes both alarm and CPU number.
Pop Up: whether you want the alarm to pop-up on the screen when it occurs, or whether you want it to be registered as an event in the Current Events Report for review at a later time.

An example of an alarm (pop-up) may be a fire or another critical situation, whereas an event may be a blown light bulb or some event that does not require immediate attention.

Auto Print: select this box in order to print in the case of an alarm.

Notes: - Help Msg: to enter the text message that is to appear in the event of an alarm.
- Press **select / edit**.
- Enter the title of the text message in the *Text Message* box- one per line. The number of the line will feature in the box in the *Alarm Properties Editor* (*Figure 2.44*).
- Press **Edit** on the right of the line in order to bring up the *Alarm Text Editor* box in which the text message may be typed.

- **Help Record:** to record the voice message that is to appear in the event of an alarm (you will need a microphone).
- Press **select / edit**.

- Enter the title of the voice message in the Sound Messages box - one per line.
The number of the line will feature in the box in the *Alarm Properties Editor* (*Figure 2.56*).
- Press **Record** to make the recording screen with all the standard buttons appear.
- Press **Play** to play your prerecorded message.

NOTE: Selecting **Auto** will ensure that the messages (either voice or text) will appear in the event of an alarm.
Selecting **Cycle** will ensure that the message is repeated over and over.

Zoom to Group: click **select** to make the *Groups Menu* in *Figure 2.03* appear. From here, double click on the group that is to be associated with the alarm.
Active: tick the box to set the alarm to active. If the box is not ticked the alarm will not occur.

Press **OK** to save all changes and close the window.
Press **Cancel** to close the window without saving changes made to the data.

Press the **Advanced** button on the *Alarm Properties Editor* in *Figure 2.44* to make the following box appear.

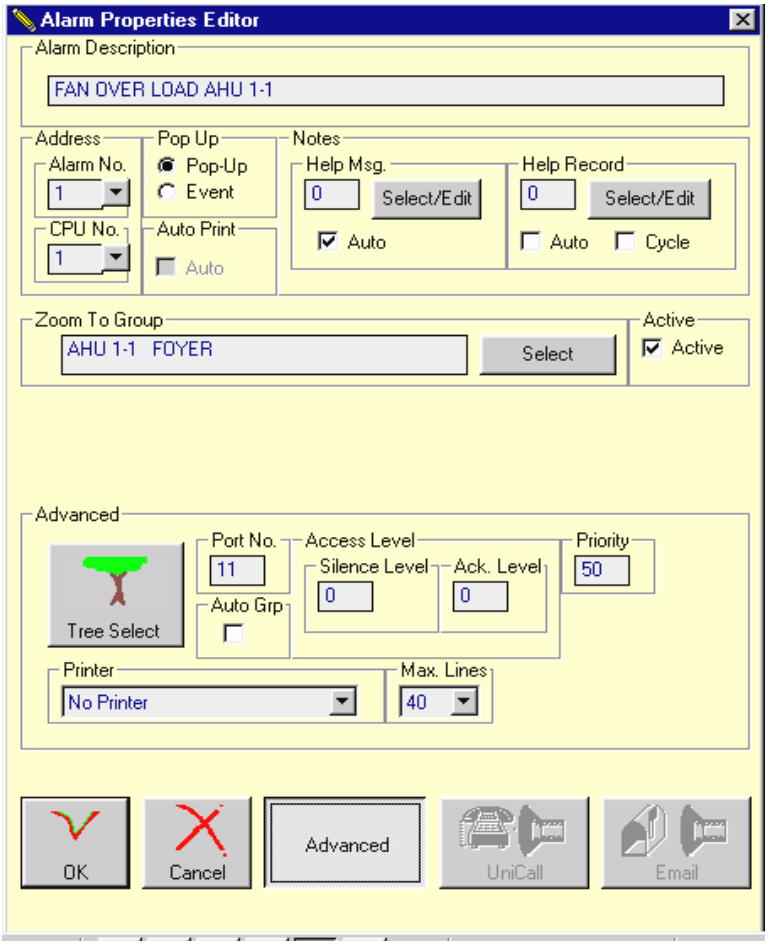


Figure 2.45 – Alarm Properties Editor - Advanced

Access Level: you can set the access level for silencing and acknowledging alarms
- Silence Level: when the alarm goes off the user with this access level or a higher one is able to turn the sound off while the box remains on screen.
- **Ack. Level:** when the alarm goes off the user with this level or a higher one is able to acknowledge it. The alarm will be recorded history, but will no longer be on screen.

Port No.: number of communication server, (*For **Port** address see Appendix A).*
Auto Grp: will make the picture appear in the case of an alarm.
NOTE: mark this box only when you have a group in the **Zoom to Group** area.
Priority: determines the level of priority for reporting alarms. This number ranges between 1-99 (where 99 has the highest priority level).

Printer: allows the selection of a local or network printer.
Max. lines: the number of lines to print.

The **Tree Select** button is no longer in use.

The two buttons at the bottom of the *Alarm Properties Editor* (*Figure 2.44*), named **UniCall** and **Email**, are optional and not installed automatically with UniArt.

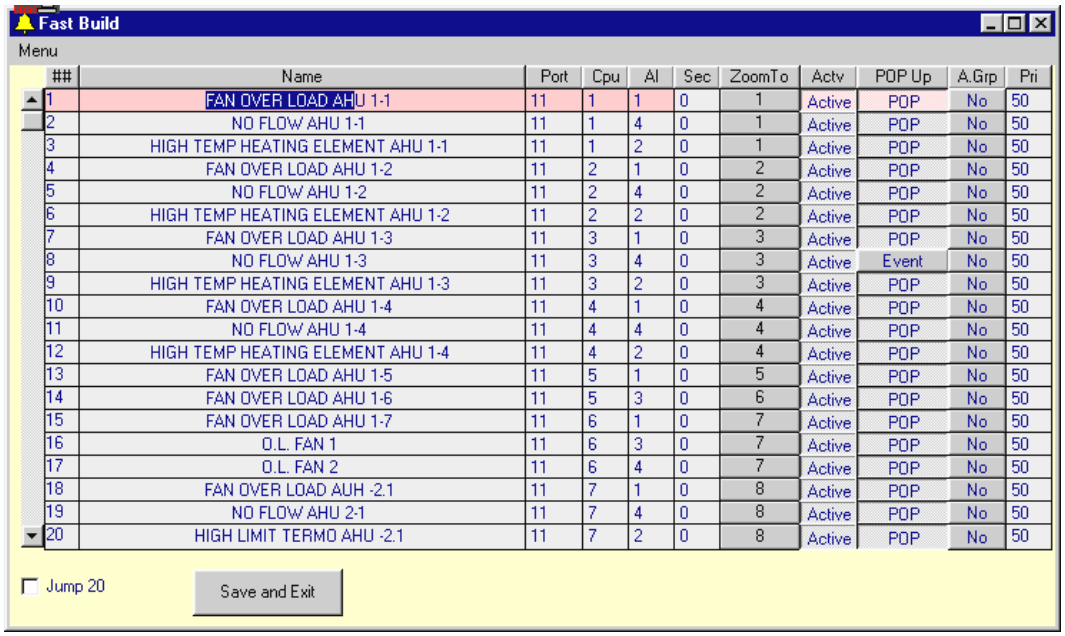
2.2.4 FAST BUILD

> Be extremely careful when using this function as there is no undo option. If unsure, use Edit Alarms screen in previous chapter.

Press the Fast Build icon in the *Alarm Manager Menu* (*Figure 2.40*) to make the following screen appear.

This option allows you to create alarms simultaneously and quickly.

Name of the alarm.
Port number.
CPU (controller) number.
Alarm number.
Security number: for the acknowledgment of alarms.
Zoom to the group that is associated with this alarm.
Active: whether the alarm is active or inactive. If the alarm is set to inactive it will not occur.
Pop-up: to register the alarm as a pop-up alarm or as an event (see *Section 2.2.3* for explanation).



##	Name	Port	Cpu	AI	Sec	ZoomTo	Actv	POP Up	A.Grp	Pri
1	FAN OVER LOAD AHU 1-1	11	1	1	0	1	Active	POP	No	50
2	NO FLOW AHU 1-1	11	1	4	0	1	Active	POP	No	50
3	HIGH TEMP HEATING ELEMENT AHU 1-1	11	1	2	0	1	Active	POP	No	50
4	FAN OVER LOAD AHU 1-2	11	2	1	0	2	Active	POP	No	50
5	NO FLOW AHU 1-2	11	2	4	0	2	Active	POP	No	50
6	HIGH TEMP HEATING ELEMENT AHU 1-2	11	2	2	0	2	Active	POP	No	50
7	FAN OVER LOAD AHU 1-3	11	3	1	0	3	Active	POP	No	50
8	NO FLOW AHU 1-3	11	3	4	0	3	Active	Event	No	50
9	HIGH TEMP HEATING ELEMENT AHU 1-3	11	3	2	0	3	Active	POP	No	50
10	FAN OVER LOAD AHU 1-4	11	4	1	0	4	Active	POP	No	50
11	NO FLOW AHU 1-4	11	4	4	0	4	Active	POP	No	50
12	HIGH TEMP HEATING ELEMENT AHU 1-4	11	4	2	0	4	Active	POP	No	50
13	FAN OVER LOAD AHU 1-5	11	5	1	0	5	Active	POP	No	50
14	FAN OVER LOAD AHU 1-6	11	5	3	0	6	Active	POP	No	50
15	FAN OVER LOAD AHU 1-7	11	6	1	0	7	Active	POP	No	50
16	O.L. FAN 1	11	6	3	0	7	Active	POP	No	50
17	O.L. FAN 2	11	6	4	0	7	Active	POP	No	50
18	FAN OVER LOAD AUH -2.1	11	7	1	0	8	Active	POP	No	50
19	NO FLOW AHU 2-1	11	7	4	0	8	Active	POP	No	50
20	HIGH LIMIT TERMO AHU -2.1	11	7	2	0	8	Active	POP	No	50

Figure 2.46 – Fast Build

Clicking on any of the headings (except **Active** and **Pop-Up**) will give you an option to fill in the same value for more than one line. You will have to fill in the start line and finish line.

Place your cursor over the line number for a particular alarm and press on the mouse button to bring up the editing functions in *Figures 2.47* and *2.48*.

NOTE: Placing your cursor over the name of the alarm will bring up editing options for the name of the alarm alone, not the entire alarm.

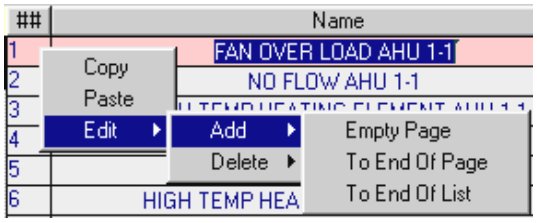


Figure 2.47 – Quick Edit - Add

Standard **copy** and **paste** function.

Empty Page: will add empty page above the alarm that is being indicated.
To End of Page: will make the current alarm move down one line in the list.
To End of List: will make the current alarm move down one line.

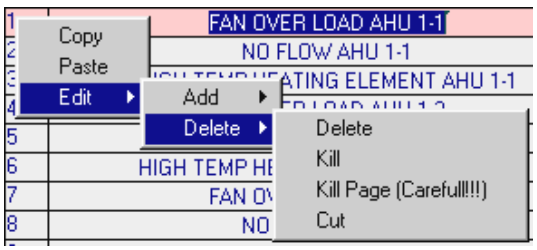


Figure 2.48 – Quick Edit – Delete

Delete: standard delete function, deletes data but leaves empty line.
Kill: deletes the data and the line.
Kill Page: deletes current page.
Cut: normal cut function.

2.2.5 ALARM REPORT HISTORY

Click on the Alarm Report History icon in the *Alarm Manager Menu* (*Figure 2.58*) to make the following screen appear.

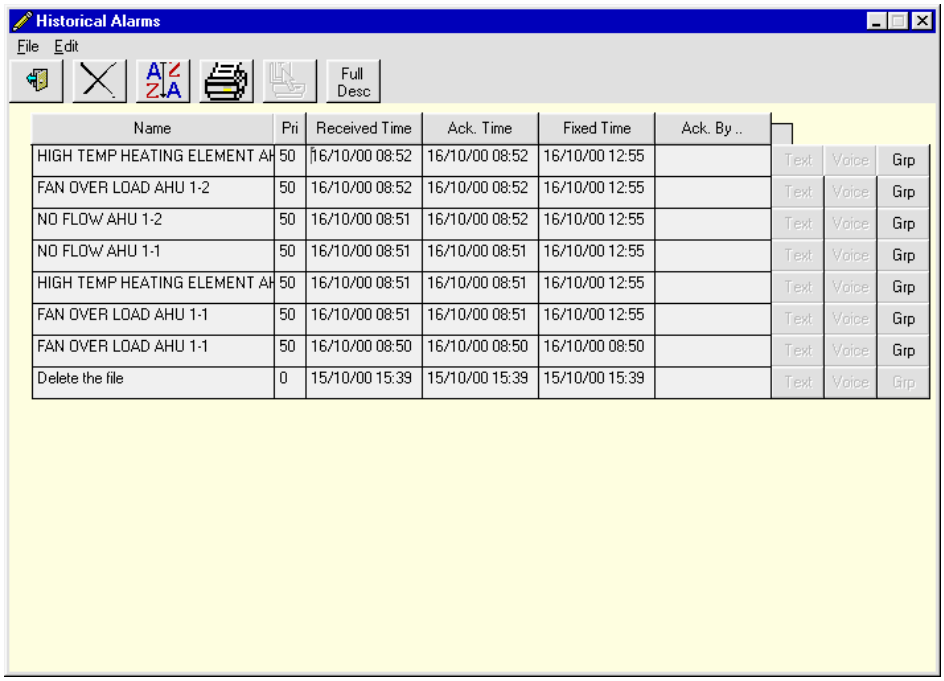


Figure 2.49 – Historical Alarms

This screen contains the details of all the alarms that occurred in the system. It is similar to the *Current Alarm Report* screen in *Figure 2.41*, the only difference being that this screen also contains the times that the alarms were fixed.

2.2.6 HISTORICAL EVENT REPORT

This screen is similar to the screen in *Figure 2.49*. The only difference is that this screen records events, not alarms.

2.2.7 PHONE AND MAIL MESSAGES

Here telephone and email messages may be defined and edited. This feature is optional, it is not standard to UniArt.

2.2.8 PRINT ALARM LIST

This function will print all of the alarms created in Edit Alarms screen (*Figure 2.43*).

2.3 - Trend Reports

The third icon on the vertical taskbar in *Figure 2.02* enables the creation of trend reports.

Press this icon to bring up the following screen.

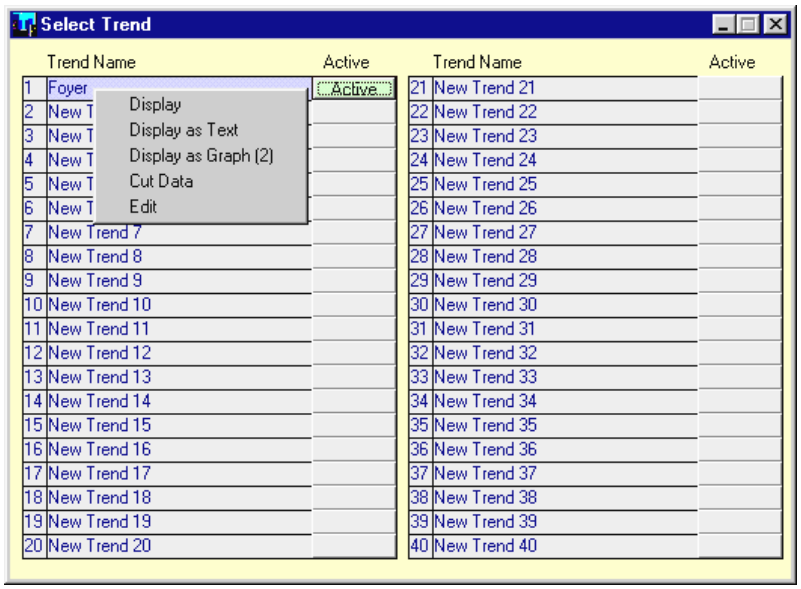
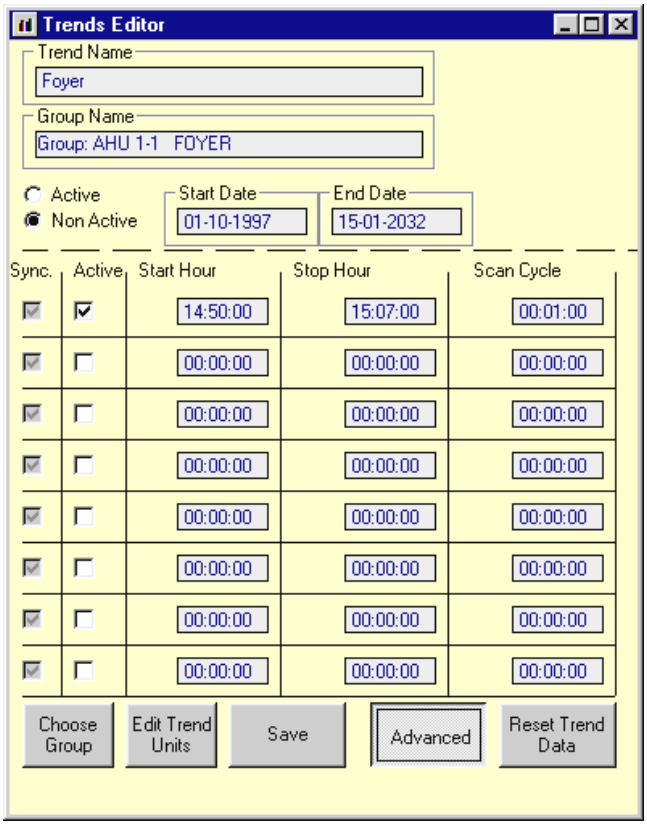


Figure 2.50 – Select Trend and sub-menu

Place the cursor over the first line in the table to bring up the menu box as above.

2.3.1 CREATING AND EDITING TRENDS



Select **EDIT** to bring up the screen in *Figure 2.51*.
Note that the **Advanced** button is depressed.

Figure 2.51 – Trends Editor

The easiest way to enter data is from a group that has already been defined. To do so press **Choose Group** and the *Groups Menu* from *Figure 2.03* will appear. To select, double click on the desired group. The group will appear automatically in **Group Name**. Press save.
NOTE: Reset the computer in order to activate the trend collector.
The group in the above example is group 1 on page 1.

Trend Name: name of the trend. Entering a name will not bring up the statistics for that group, it is for the users purposes only.
Group Name: name of the group of points.
Start and End Date: the day for the trend to begin and end.
Non/Active: to activate the trend.
Sync: the trend cycle will be synchronised with round numbers (hours or minutes)
Active square: activates that start and stop hour.
Start hour: time to start gathering data.
Stop hour: stop gathering data.
Scan Cycle: how often to collect data according to HH:MM:SS.

Edit Trend Units: to change any data from a chosen group, or to enter data without choosing a group (**Choose Group**).
Save: to save any changes made.
Reset Trend data: CAUTION when using this button, as all past trend data will be erased.

2.3.2 GRAPHICAL DISPLAY OF TRENDS

DISPLAY: (from sub-menu in *Figure 2.50*) will show trend as a graph, as can be seen in *Figure 2.52*. Alternately, double clicking on the desired trend will make this graph appear. All the values here are zero so the recorded data appears as one straight line.
NOTE: data will be displayed as graph only after 5 cycles of data collection. Data can be read as text before 5 cycles are complete, see *Section 2.3.3*.

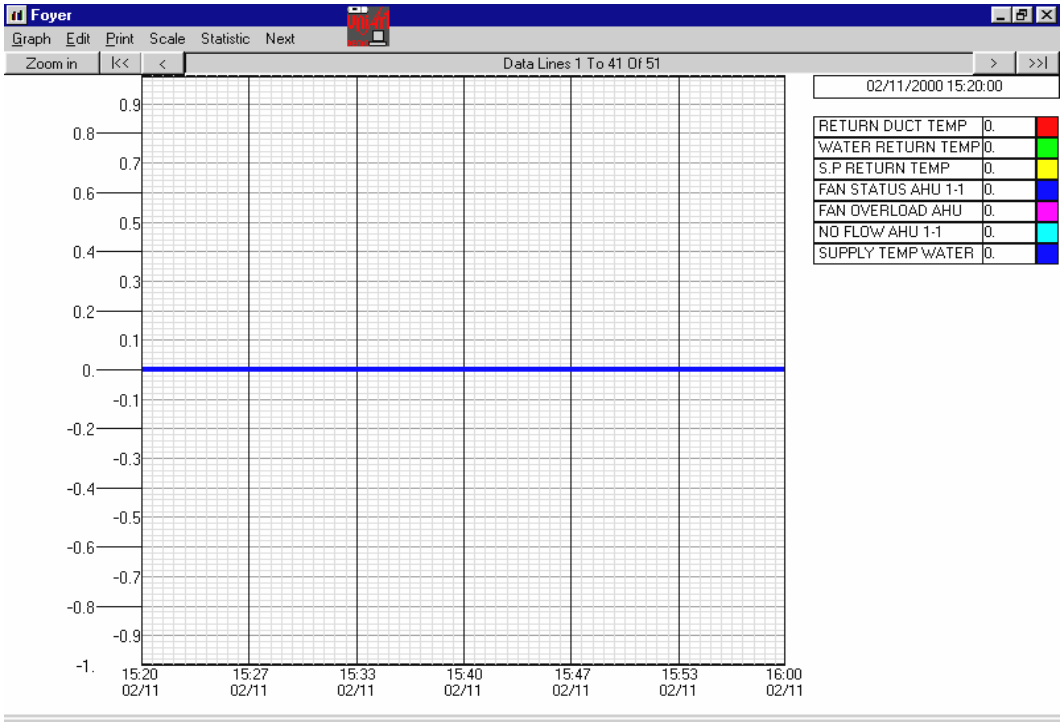


Figure 2.52 – Foyer graphical data

NOTICE that when the cursor scans over the graph it turns to a +. The position of the cursor on the graph is recorded in the top right hand corner of the screen.

Trend Toolbar:

Figure 2.53 – Trend Toolbar

- Press **GRAPH** to bring up the following sub-menu.

Figure 2.54 – Trend Toolbar sub-menu

Back Color: Pressing this button will make a colour palette appear. Select the background colour of the graph.
Grid: gives you the option to set the graph with horizontal grid, vertical grid or both.
Zoom: to zoom in and focus on data within a smaller range and zoom out to return you to the entire graph. Alternately you can use the **Zoom In** button directly underneath the toolbar.
- When scrolling over the graph with your mouse the cursor changes to a plus (+). With this +, drag and highlight the area that you wish to magnify with the zoom.

Select: to choose from which points from the group (AHU 1-1 Foyer) to display. Each point is defined by a different colour.
Line Width: to choose the width of the line graph (1=thin, 6=thick).

NOTE: It may be necessary to exit and re-enter the screen after changing data.

- Press **EDIT** to allow you the following options:

Copy: to copy the data and paste it where it can be viewed in text form (Word, Excel or Notepad). The table will be similar to that in *Figure 2.57.*
Copy Picture: to copy the graph and paste in any program that supports pictures (Word, Paint Shop Pro or PhotoShop). The graph will be similar to that in *Figure 2.58*.

- Choose to **PRINT** either **This Graph** or **Text Data**.

- Press **SCALE** to allow you the following options:

Proportional: will set line graphs in proportion to each other on one of their scales. The name that appears will determine the scale. In order to change the scale, press **NEXT** on the toolbar.
Full Scale: Will set the display data in the scale as defined in **Define Range to Data**.
Define Range to Data: to set the range of the scale. Pressing **AutoAll** will select all of the points and set the scale automatically according to the data.
Select Times: the screen in *Figure 2.55* will appear, allowing you to limit the displayed data according to dates and times.

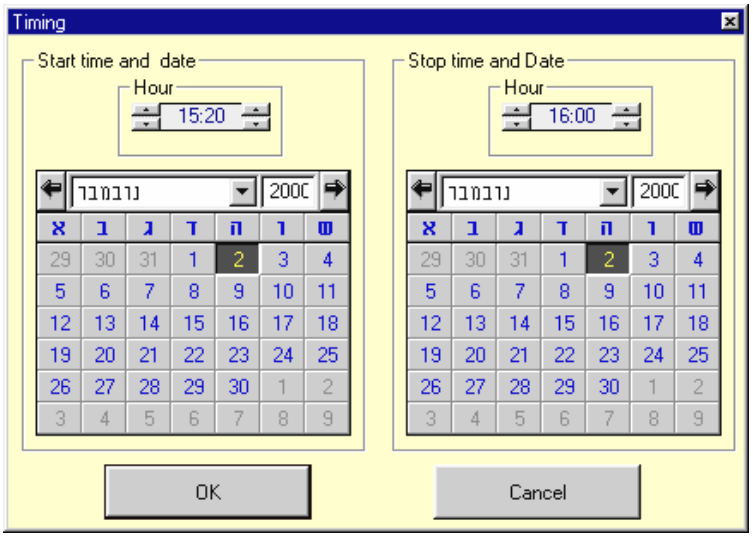


Figure 2.55 - Timing

Here, you will have to define the start and stop times and dates for the data collection.

Press **OK** and the box in *Figure 2.56* will appear.

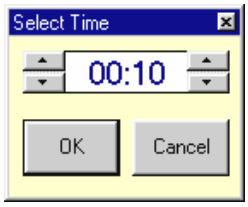


Figure 2.56 – Select Time

Enter the time cycle for the data collection in the format HH:MM.

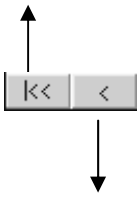
In the above example, although unrealistic, an average is taken every 10 minutes between 15:20 and 16:00 on the 2/11/00. As the data was collected every one minute, the average is taken from 10 values every 10 minutes.

- Press **STATISTIC** to allow you the following options:

See Minimum and Maximum: provides a table with minimums, maximums and averages of all points between the times defined in **Select Times**.
Create Average Graph: opens the screen in *Figure 2.55*.
Fill in appropriate times and dates.

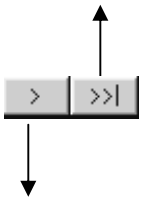
In the line underneath the toolbar you will see arrows as below:

Jump to first page



Go back 1 page

Jump to last page



Go forward 1 page

DISPLAY AS GRAPH (2): for old format graph collectors, not supported in most computers.

2.3.3 – TEXT DISPLAY OF TRENDS

DISPLAY AS TEXT: press this button to bring up the table in *Figure 2.57*.

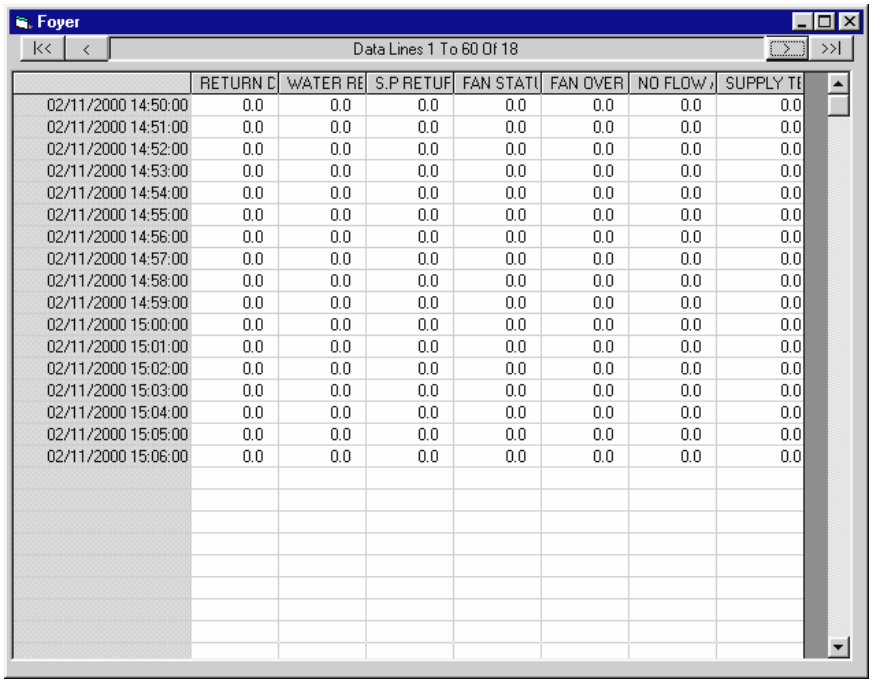


Figure 2.57 – Foyer Text Data

The data in this table shows that every one minute, on the minute, between 14:56 and 15:07 the data was read. Here, all the values are zero as there is no real data in the trend collector.

2.3.4 – DELETING DATA

CUT DATA: selecting this option will bring up the following box. This option allows you erase irrelevant data from the hard disk. All data collected before the selected date will be erased.

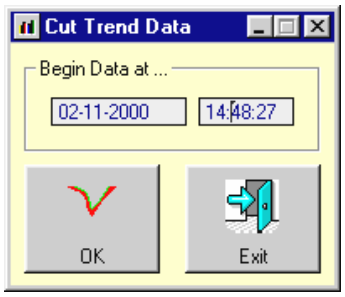


Figure 2.58 – Cut Trend Data

2.4 - Time Program / Time dependant actions

The fourth icon on the vertical taskbar in *Figure 2.02* enables the creation of time dependant actions.

Press this icon to bring up the following menu.

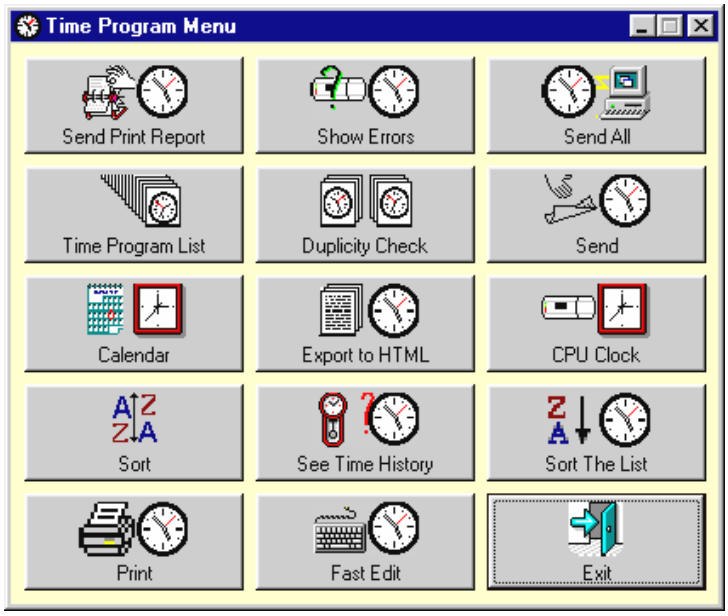


Figure 2.59 – Time Program Menu

With this menu you can edit and send time programs to the controllers in the system.

2.4.01 SEND PRINT REPORT

Selecting this button will ensure that a report is printed after a program is sent to the controller.
Press once to set this option and press again to close it.

2.4.02 SHOW ERRORS

Selecting this button will ensure that a list of all errors that occurred will be displayed on your screen after the sending of any program.
Press once to set this option and press again to close it.

2.4.03 SEND ALL

Press this button to send all the time programs to the controllers. This will override the time that any individual program is set to be sent.

2.4.04 TIME PROGRAM LIST

Press this button to bring up the screen in *Figure 2.60*.

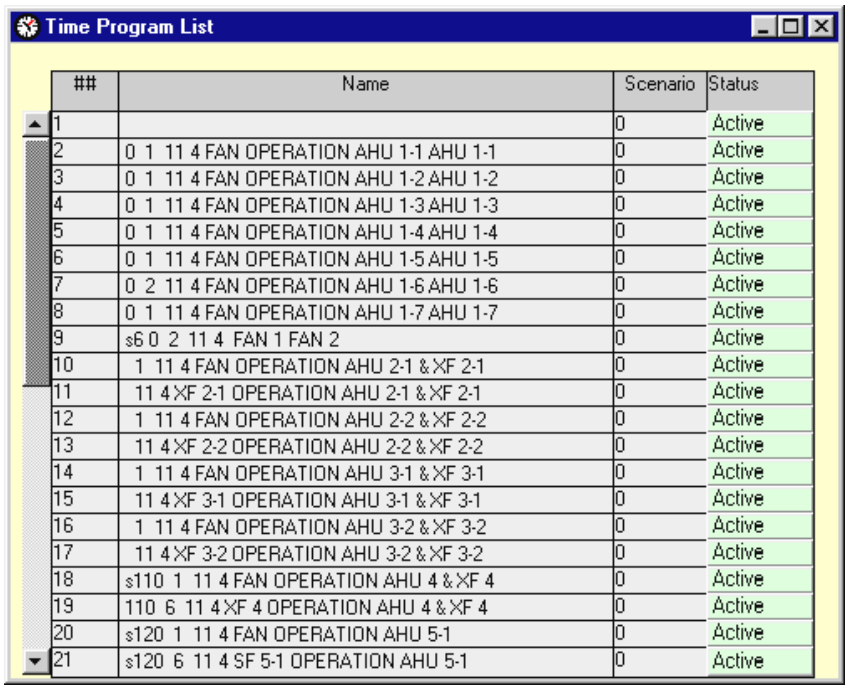

Time Program List
Name Scenario Status
1 Active
2 0 1 11 4 FAN OPERATION AHU 1-1 AHU 1-1 0 Active
3 0 1 11 4 FAN OPERATION AHU 1-2 AHU 1-2 0 Active
4 0 1 11 4 FAN OPERATION AHU 1-3 AHU 1-3 0 Active
5 0 1 11 4 FAN OPERATION AHU 1-4 AHU 1-4 0 Active
6 0 1 11 4 FAN OPERATION AHU 1-5 AHU 1-5 0 Active
7 0 2 11 4 FAN OPERATION AHU 1-6 AHU 1-6 0 Active
8 0 1 11 4 FAN OPERATION AHU 1-7 AHU 1-7 0 Active
9 s6 0 2 11 4 FAN 1 FAN 2 0 Active
10 1 11 4 FAN OPERATION AHU 2-1 & XF 2-1 0 Active
11 11 4 XF 2-1 OPERATION AHU 2-1 & XF 2-1 0 Active
12 1 11 4 FAN OPERATION AHU 2-2 & XF 2-2 0 Active
13 11 4 XF 2-2 OPERATION AHU 2-2 & XF 2-2 0 Active
14 1 11 4 FAN OPERATION AHU 3-1 & XF 3-1 0 Active
15 11 4 XF 3-1 OPERATION AHU 3-1 & XF 3-1 0 Active
16 1 11 4 FAN OPERATION AHU 3-2 & XF 3-2 0 Active
17 11 4 XF 3-2 OPERATION AHU 3-2 & XF 3-2 0 Active
18 s110 1 11 4 FAN OPERATION AHU 4 & XF 4 0 Active
19 110 6 11 4 XF 4 OPERATION AHU 4 & XF 4 0 Active
20 s120 1 11 4 FAN OPERATION AHU 5-1 0 Active
21 s120 6 11 4 SF 5-1 OPERATION AHU 5-1 0 Active

Figure 2.60 – Time Program List

This screen displays the list of time programs. The right-hand **Status** column indicates whether or not the program is **Active** at the current time.

Double click on any of the lines to bring up the screen in *Figure 2.61*. Note that the **Advanced** button at the bottom of the screen has been selected.

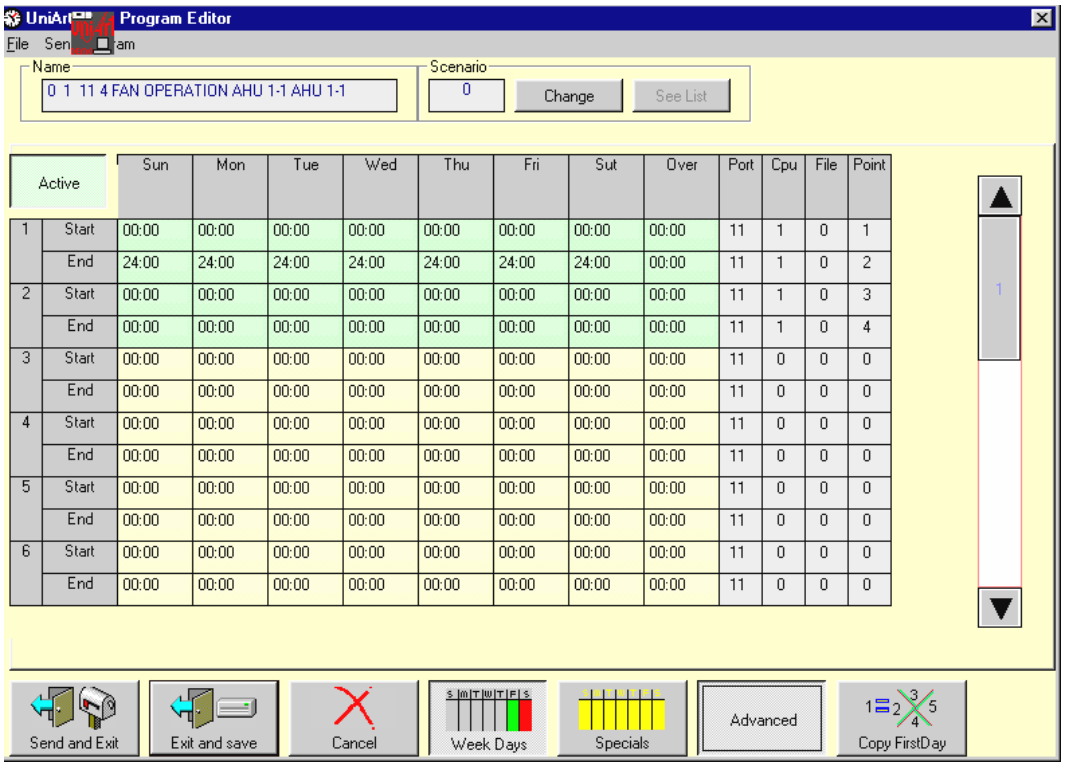


Figure 2.61 – Time Program Editor

Name: the name of the time program.

For every day, you can set different hours for the program to start and stop. Click inside each cell to insert the times.

Scenario: this number represents a group of time programs that follow the same schedule. All programs with the same number follow the same timetable.

Changes made to any time program will affect all programs in the same scenario.	Where the scenario number is "0" the programs do not belong to any group.

Change: Pressing this button will make a box appear with the scenario numbers and their associated program lists. This box enables you to change the scenario number.

See List: Pressing this button will show you a list of the time programs and their scenario number.

Advanced options open up **Port**, **CPU**, **File** and **Point** columns.

Over: this gives you the option to manually override the current timetable setting. Send program to activate.

The **Active** button, shown depressed in *Figure 2.61,* indicates whether the program is to be sent. When it is set to **Not Active** the program will not be sent.

Copy First Day: once Start and Stop times have been entered in the first day of the week, you can copy these same times for the entire week.

To change the first day of the week see *Chapter 2.4.07 – Calendar*.

Weekdays/Specials: currently the calendar is set to **Weekdays** (the button is depressed). Alternately, you can set the calendar to **Special Days**, which allow for special time programs for holidays and other special events.
- The **Active** buttons at the bottom of each column in the **Special Days** screen are similar to the **Active** button in the top right hand corner of the timetable. The difference is that these activate or deactivate the settings for each special day and not for the whole program.
- The row directly underneath the Special Days, numbered 1-8, is to insert dates as oppose to just times. Use the format DD/MM/YY.

Time programs are sent daily at 00:00 (midnight) unless defined differently.

Cancel: to leave the screen without saving any changes that were made.

Send and Exit: to send the program and exit the *Time Program Editor*.

Exit and save: save the changes to the disk and exit the *Time Program Editor* without sending.

The toolbar at the top of the screen:

File: Save, **Cancel**, **Exit and Save** and **Send and Exit.**

Send Program:-

Today: to send the current program now.

Over: to send the override program.

Open: to send start time as 00:00 and close as 24:00 so that it is continuously open.

Close: to send start time as 00:00 and close as 00:00 so that it is continuously off.

Special 1-8: to send one of the Special Days numbered 1-8.

2.4.05 DUPLICITY CHECK

Press this button to make the screen in *Figure 2.62* appear.

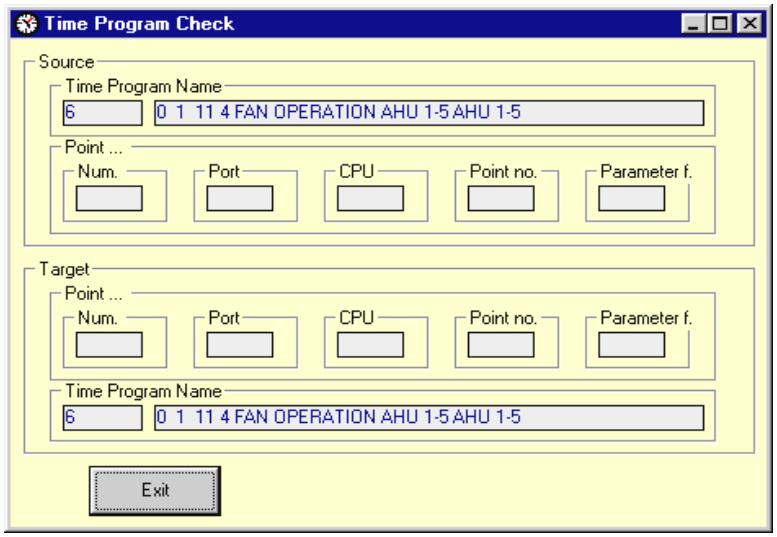
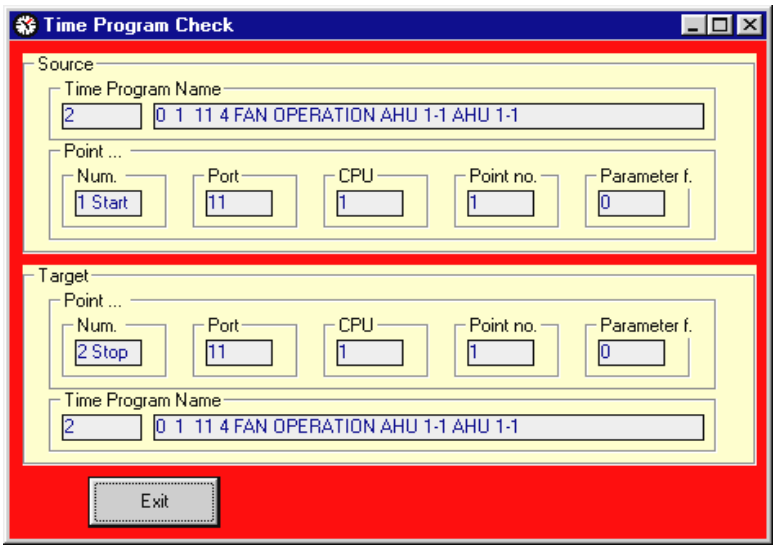


Figure 2.62 – Time Program Check A

This program ensures that no duplicate or conflicting parameters are sent to the controller. Once all time programs have been searched and no problems found a comment box saying “Done, No Errors” will appear. If errors were found the box in *Figure 2.63* will appear.



Here the error occurred because the **Point** number is the same for both start and stop.

Figure 2.63 – Time Program Check B

This box is coloured red and outlines where the first error is located. Once this error is fixed it is recommended to redo the Duplicity Check to check for further errors.

2.4.06 SEND

Press this button to make the box in *Figure 2.64* appear.

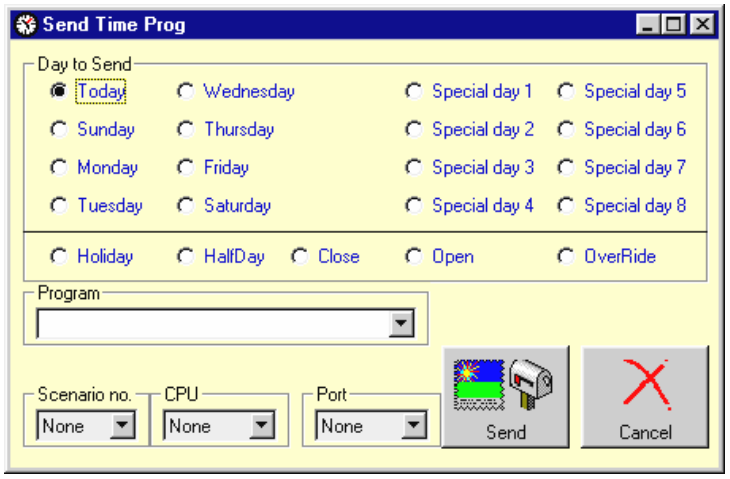


Figure 2.64 – Send Time Program

This box gives you the option to manually send an individual program now for any particular day. This is primarily used for test purposes.

Choose whether to send a regular day of the week or a special day.

You can also choose whether to send a:
Holiday: the last day of the week (the default is Saturday although this can be changed in *Section 2.4.07 - Calendar*),
Half day: the day before the last day of the week (the default is Friday),
Close, open or override (see above *Section 2.4.04* for definition).

Press on the **Program** box to make a list of programs appear. Choose the relevant program to be sent.

Other options that can be chosen are the **Scenario** number, **CPU** number and **Port** number.

Send: send the program as it is defined to the defined address.

Cancel: exit the screen without saving any changes made.

2.4.07 CALENDAR

Press this button to make the box in *Figure 2.65* appear.

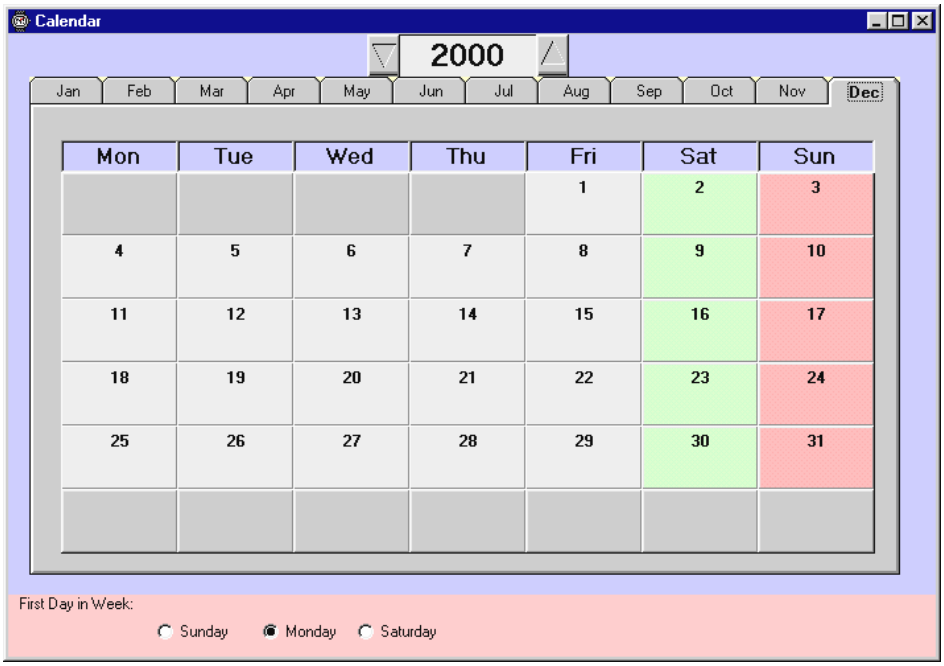


Figure 2.65 - Calendar

Note that you can change the setting of the first day of the week. The default is Sunday, but here, as in the English calendar it is set to Monday.

The day types are set according to colours.
Grey = regular day.
Pink = Holiday (last day of the week).
Green = Half Day (day before the last day of the week).
Yellow = Special Day.
Black = Close (to send start and stop time as 00:00 so that the program is always off).

One mouse click on any day brings up a dropdown menu enabling you to select the type of day. Once a day type is chosen it will become it's appropriate colour, as above.

You will then be required to give a name to the day. In order to delete this name click again on the particular day, set it to Normal (or other) and in the place of the name description click once on the spacebar.

2.4.08 EXPORT TO HTML

Clicking on this button will convert the time programs to HTML format. You will find the file in your database.

2.4.09 CPU CLOCK

Press this button to make the box in *Figure 2.66* appear.

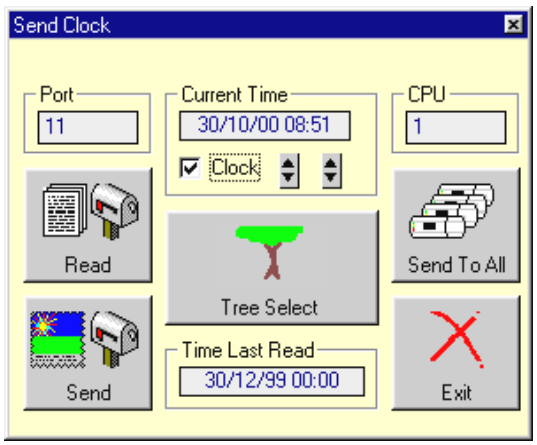


Figure 2.66 – Send Clock

This screen enables you to send the new time to either one or all of the controllers in this particular Appserver.

Read allows you to see the time in the chosen controller.

In order for the program to be sent to the right controller you must insert a **Port** number. For **Port** address see *Appendix A.* When sending to one controller only, the **CPU** number should also be included.

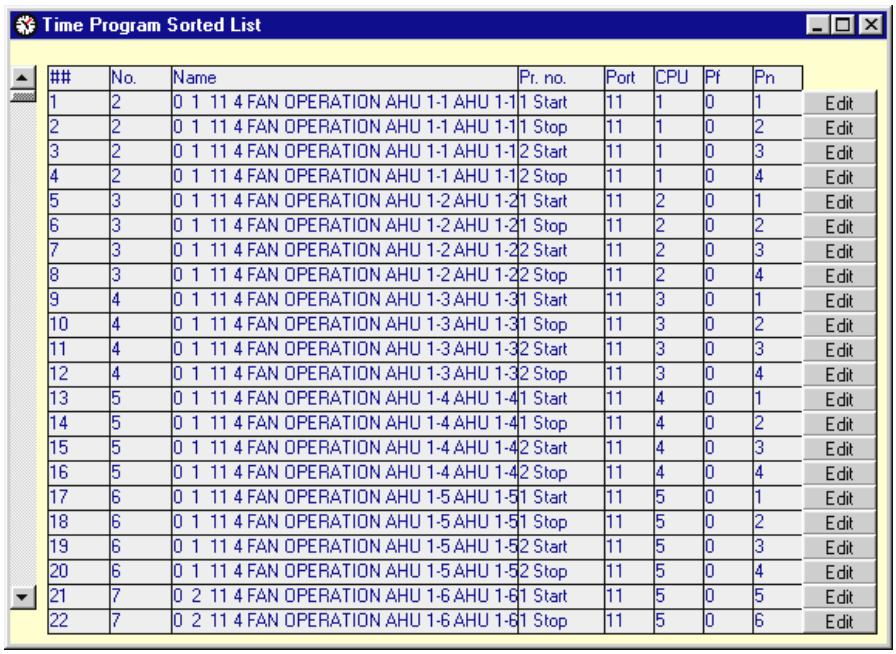
Current Time: the checkbox next to **Clock** allows you to set the clock according to that of the computer (tick) or some other time (no tick). The arrows are used to change the time manually.

Time Last Read: this box displays the time that was sent to the controller. Press **Read** to see the time in the chosen controller.
If the controller did not receive the sent time a special message will appear.

The **Tree Select** button is no longer in use.

2.4.10 SORT

Press this button to make the box in *Figure 2.67* appear.



##	No.	Name	Pr. no.	Port	CPU	Pf	Pn	
1	2	0 1 11 4 FAN OPERATION AHU 1-1 AHU 1-1	1 Start	11	1	0	1	Edit
2	2	0 1 11 4 FAN OPERATION AHU 1-1 AHU 1-1	1 Stop	11	1	0	2	Edit
3	2	0 1 11 4 FAN OPERATION AHU 1-1 AHU 1-1	2 Start	11	1	0	3	Edit
4	2	0 1 11 4 FAN OPERATION AHU 1-1 AHU 1-1	2 Stop	11	1	0	4	Edit
5	3	0 1 11 4 FAN OPERATION AHU 1-2 AHU 1-2	1 Start	11	2	0	1	Edit
6	3	0 1 11 4 FAN OPERATION AHU 1-2 AHU 1-2	1 Stop	11	2	0	2	Edit
7	3	0 1 11 4 FAN OPERATION AHU 1-2 AHU 1-2	2 Start	11	2	0	3	Edit
8	3	0 1 11 4 FAN OPERATION AHU 1-2 AHU 1-2	2 Stop	11	2	0	4	Edit
9	4	0 1 11 4 FAN OPERATION AHU 1-3 AHU 1-3	1 Start	11	3	0	1	Edit
10	4	0 1 11 4 FAN OPERATION AHU 1-3 AHU 1-3	1 Stop	11	3	0	2	Edit
11	4	0 1 11 4 FAN OPERATION AHU 1-3 AHU 1-3	2 Start	11	3	0	3	Edit
12	4	0 1 11 4 FAN OPERATION AHU 1-3 AHU 1-3	2 Stop	11	3	0	4	Edit
13	5	0 1 11 4 FAN OPERATION AHU 1-4 AHU 1-4	1 Start	11	4	0	1	Edit
14	5	0 1 11 4 FAN OPERATION AHU 1-4 AHU 1-4	1 Stop	11	4	0	2	Edit
15	5	0 1 11 4 FAN OPERATION AHU 1-4 AHU 1-4	2 Start	11	4	0	3	Edit
16	5	0 1 11 4 FAN OPERATION AHU 1-4 AHU 1-4	2 Stop	11	4	0	4	Edit
17	6	0 1 11 4 FAN OPERATION AHU 1-5 AHU 1-5	1 Start	11	5	0	1	Edit
18	6	0 1 11 4 FAN OPERATION AHU 1-5 AHU 1-5	1 Stop	11	5	0	2	Edit
19	6	0 1 11 4 FAN OPERATION AHU 1-5 AHU 1-5	2 Start	11	5	0	3	Edit
20	6	0 1 11 4 FAN OPERATION AHU 1-5 AHU 1-5	2 Stop	11	5	0	4	Edit
21	7	0 2 11 4 FAN OPERATION AHU 1-6 AHU 1-6	1 Start	11	5	0	5	Edit
22	7	0 2 11 4 FAN OPERATION AHU 1-6 AHU 1-6	1 Stop	11	5	0	6	Edit

Figure 2.67 – Time Program Sorted List

The Time Program List sorts all the programs and displays line by line each start and stop points.

This screen is used mainly for debugging purposes and checking for duplicates.

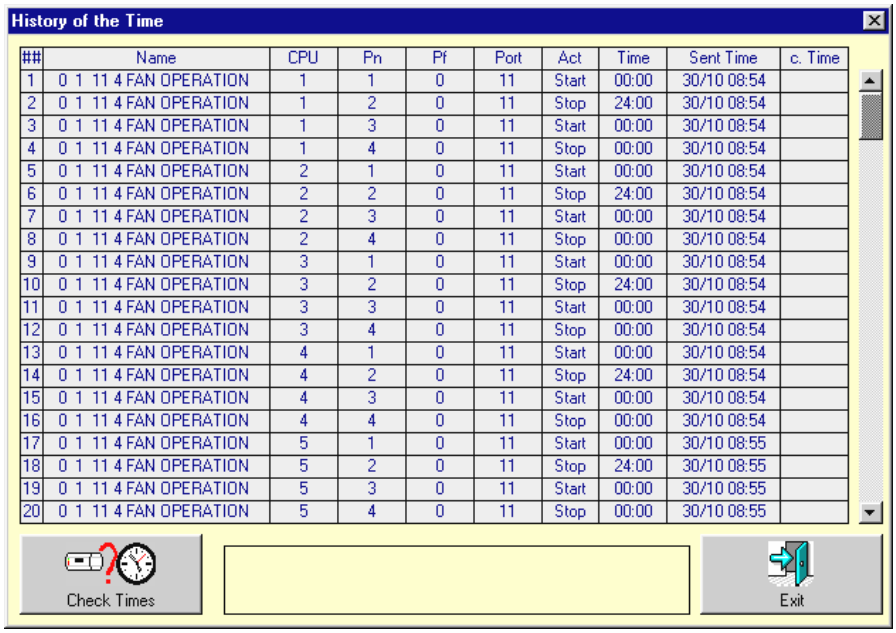
The last four columns (apart from Edit) classify the programs according to their addresses including file numbers (Pf) and parameter numbers (Pn).

This list displays the following time program details:
Line Number
Program Number
Name
Start/Stop
Port
CPU
Pf (parameter file)
Pn (point number)

Click on **Edit** in the right hand column to open the *Time Program Editor* in *Figure 2.61*. This screen enables further editing options.

2.4.11 SEE TIME HISTORY

Press this button to make the screen in *Figure 2.68* appear.



##	Name	CPU	Pn	Pf	Port	Act	Time	Sent Time	c. Time
1	0 1 11 4 FAN OPERATION	1	1	0	11	Start	00:00	30/10 08:54	
2	0 1 11 4 FAN OPERATION	1	2	0	11	Stop	24:00	30/10 08:54	
3	0 1 11 4 FAN OPERATION	1	3	0	11	Start	00:00	30/10 08:54	
4	0 1 11 4 FAN OPERATION	1	4	0	11	Stop	00:00	30/10 08:54	
5	0 1 11 4 FAN OPERATION	2	1	0	11	Start	00:00	30/10 08:54	
6	0 1 11 4 FAN OPERATION	2	2	0	11	Stop	24:00	30/10 08:54	
7	0 1 11 4 FAN OPERATION	2	3	0	11	Start	00:00	30/10 08:54	
8	0 1 11 4 FAN OPERATION	2	4	0	11	Stop	00:00	30/10 08:54	
9	0 1 11 4 FAN OPERATION	3	1	0	11	Start	00:00	30/10 08:54	
10	0 1 11 4 FAN OPERATION	3	2	0	11	Stop	24:00	30/10 08:54	
11	0 1 11 4 FAN OPERATION	3	3	0	11	Start	00:00	30/10 08:54	
12	0 1 11 4 FAN OPERATION	3	4	0	11	Stop	00:00	30/10 08:54	
13	0 1 11 4 FAN OPERATION	4	1	0	11	Start	00:00	30/10 08:54	
14	0 1 11 4 FAN OPERATION	4	2	0	11	Stop	24:00	30/10 08:54	
15	0 1 11 4 FAN OPERATION	4	3	0	11	Start	00:00	30/10 08:54	
16	0 1 11 4 FAN OPERATION	4	4	0	11	Stop	00:00	30/10 08:54	
17	0 1 11 4 FAN OPERATION	5	1	0	11	Start	00:00	30/10 08:55	
18	0 1 11 4 FAN OPERATION	5	2	0	11	Stop	24:00	30/10 08:55	
19	0 1 11 4 FAN OPERATION	5	3	0	11	Start	00:00	30/10 08:55	
20	0 1 11 4 FAN OPERATION	5	4	0	11	Stop	00:00	30/10 08:55	

Figure 2.68 – Time History

This screen displays all the time programs as they were last sent.

Clicking on the **Check Times** button at the bottom left of the screen will start a check of the status of parameters in the controller at the time of the check. The results will appear per line on the right hand side column.
The number of time programs will determine the amount of time this check will take.
Error messages indicate that either there is a problem with communicating with the controller or the parameters or addresses have not been properly defined.

2.4.12 SORT THE LIST

Click on this button to sort the time programs in descending order on the disk.
This button will not make a time program list appear automatically.
Changes can be seen in the screen displayed in *Figure 2.60* in *Section 2.4.04*.
NOTE that this button does not perform the same function as ***Sort*** in *Section 2.4.10*. This button sorts the list in order of the time program names whereas the button in *Section 2.4.10* sorts the list according to points.

2.4.13 PRINT

Press this button to print a list of the time programs.

2.4.14 FAST EDIT

This button is for the use of Control Applications Ltd. personnel only!

2.4.15 EXIT

To close the *Time Program Menu* window as displayed in *Figure 2.59*.

2.5 - Calendar

The fifth icon on the vertical taskbar in *Figure 2.02* makes the same calendar as shown in *Figure 2.65* appear.
This icon acts as a shortcut to the calendar with all the same functions as explained in *Section 2.4.07*.

2.6 - Password and Access Level Setting

The sixth icon along the vertical taskbar in *Figure 2.02* is key-shaped and enables the setting of all passwords and access levels in UniArt.

The allocation of access levels to individual screens is usually performed in the Properties Editor of that particular screen.
Eg.) access levels for alarms can be set in the *Advanced Alarm Properties Editor* in *Figure 2.45.*

Clicking on this icon will require that the user enter a password for User level 99. This is the highest access level and is recommended for supervisors.

Once a password has been entered the screen in *Figure 2.69* will appear.

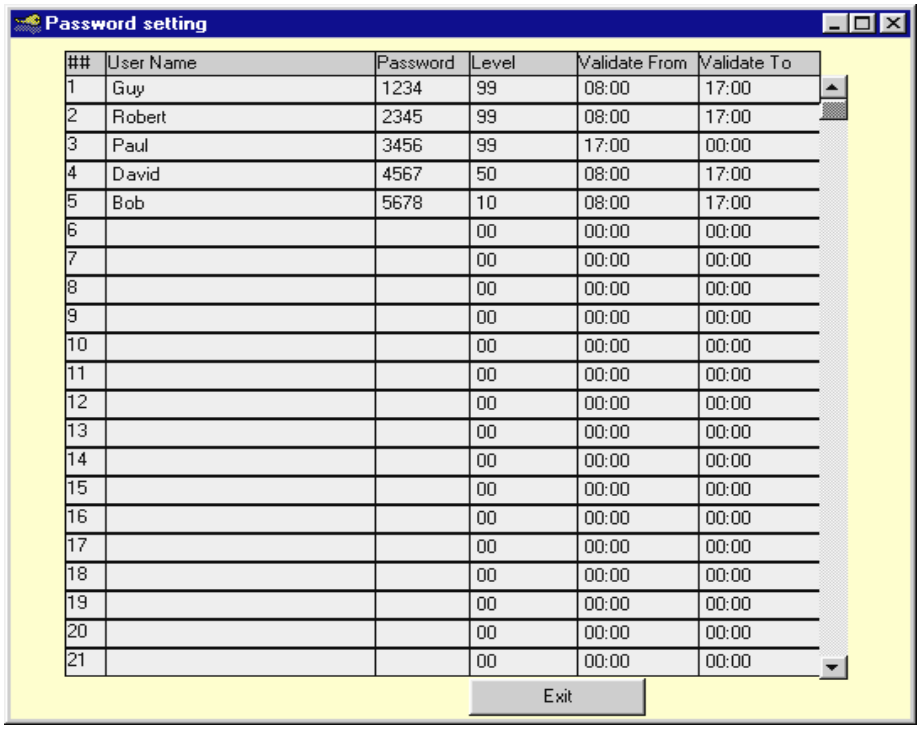


Figure 2.69 – Password Setting

- This screen enables the supervisor to allocate passwords and access levels to the workers.
- Every user should have their own password.
- User level can be any number between 1-99.

- This table also allows the supervisor to allocate access times to each user by filling in the **Validate from** and **Validate To** boxes. Validating from and to 00:00 will ensure 24 hour access.

In order to set access levels for the vertical taskbar (*Figure 2.02*) click with the right mouse button on the desired icon. The box in *Figure 2.70* will appear.

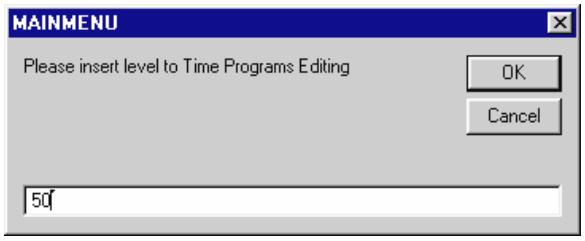


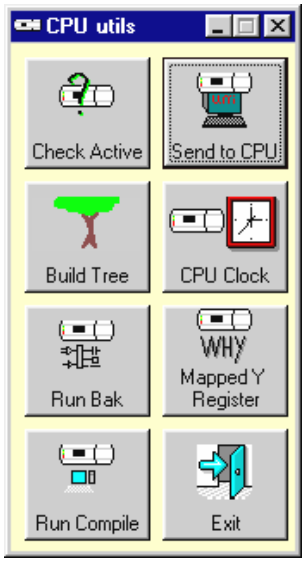
Figure 2.70 – Access Level set-up

In this box enter a number 1-99 in order to limit access to the relevant screen. Here, the access level is 50. Any user with a security level of 50 or higher can access this screen.

2.7 - Voice Messages

The sixth icon on the vertical taskbar is for Control Applications Ltd. personnel only.

2.8 - Special Programming Features



The seventh icon in the vertical task bar in *Figure* 2.02 brings up the window in *Figure 2.71*.

Figure 2.71 – CPU Utilities Menu

2.8.1 CHECK ACTIVE

Press this button to make the screen in *Figure 2.72* appear.

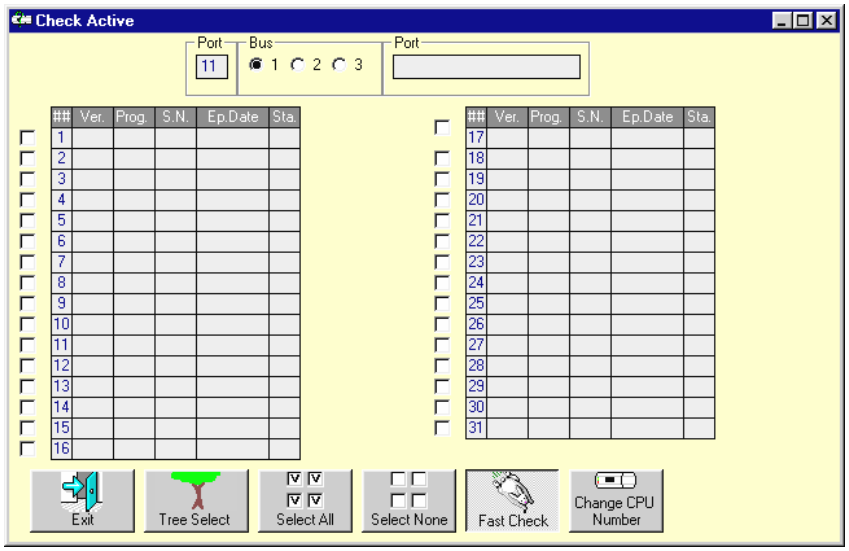


Figure 2.72 – Check Active

Port: insert port number.
Bus: insert bus number.
Port (text box): this box will be filled in automatically when the port and bus numbers are inserted.

Fast Check: Clicking on this button and leaving it depressed will enable you to speedily check whether a particular controller is working.
In order to do so, place a tick in the box next to the controller that you would like to check and fill in the relevant bus and port number.

If the controller is working, the following parameters will appear and the line will turn green:
Ver (version)
Prog (program)
S.N (serial number)
Ep. Date (eprom date)
Sta (status)

If the controller is not working, the line will turn red and you will get a message in the **Status** (sta.) column.

The **Tree Select** button is no longer in use.

Change CPU number: Clicking on this button will bring up the screen in *Figure 2.73*.

- Fill in **bus** and **port** numbers.
- Fill in the **Source** CPU number and the **Target** CPU number.

Select All CPU's: all lines will be selected for checking.
Select None: no lines will be selected for checking, they will need to be ticked manually.

Press **Change** to save changes and leave the menu or press **Cancel** to exit the menu without saving the changes.

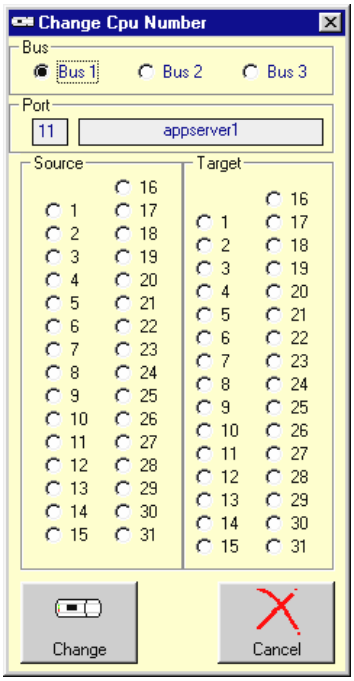


Figure 2.73 – Change CPU number

2.8.2 SEND TO CPU

Click on this button to make the screen in *Figure 2.74* appear. The screen will open with the last program that was sent.

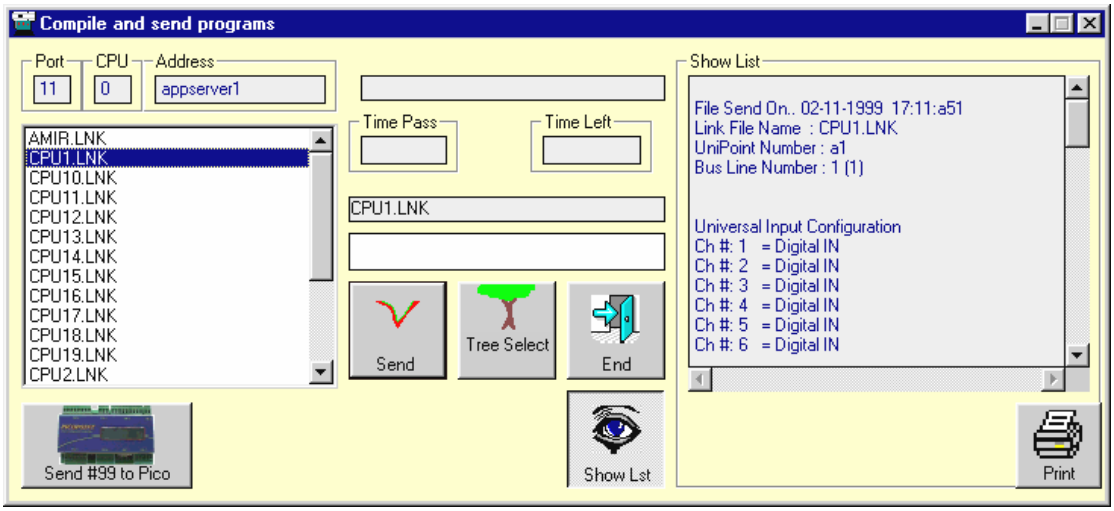


Figure 2.74 – Compile and Send Programs

This screen enables you to choose and send programs to a specific controller.

- Insert the **Port** and **CPU** number of the destination.
- Choose the program to be sent from the large left window.

- Press the **Show List** button to display the structure of the chosen CPU. Double-clicking on any of the file names will fill in the details in the **Show List** window.

The **Tree Select** button is no longer in use.
The text box next to **Address** will be filled in automatically.
Time Past: the time lapsed since the program was sent.
Time Left: the estimated remaining time for sending the program.

The higher of the 2 text boxes displays the name of the program.
The lower of the 2 text boxes enables you to enter a few letters while a search is performed for programs that include those letters.

Send: to send the program to the controller.
End: to exit the menu.
Send #99 to Pico: for use within Israel only.
Print: to print the structure of the CPU.

2.8.3 BUILD TREE

This button is being discontinued and is longer in use.

2.8.4 CPU CLOCK

Pressing on this button will bring up the *Send Clock* screen in *Figure 2.66*. See *Section 2.4.09* for the functions of this screen.

2.8.5 RUN BAK

Used for writing programs.

2.8.6 MAPPED Y REGISTER

Used for checking programs.

2.8.7 RUN COMPILE

Used for writing programs.

2.8.8 EXIT

To exit the *CPU Utilities Menu*.

2.9 Settings

The ninth icon on the vertical taskbar in *Figure 2.02* enables you to choose the desired database for the system.

Press this icon to bring up the screen in *Figure 2.75*.

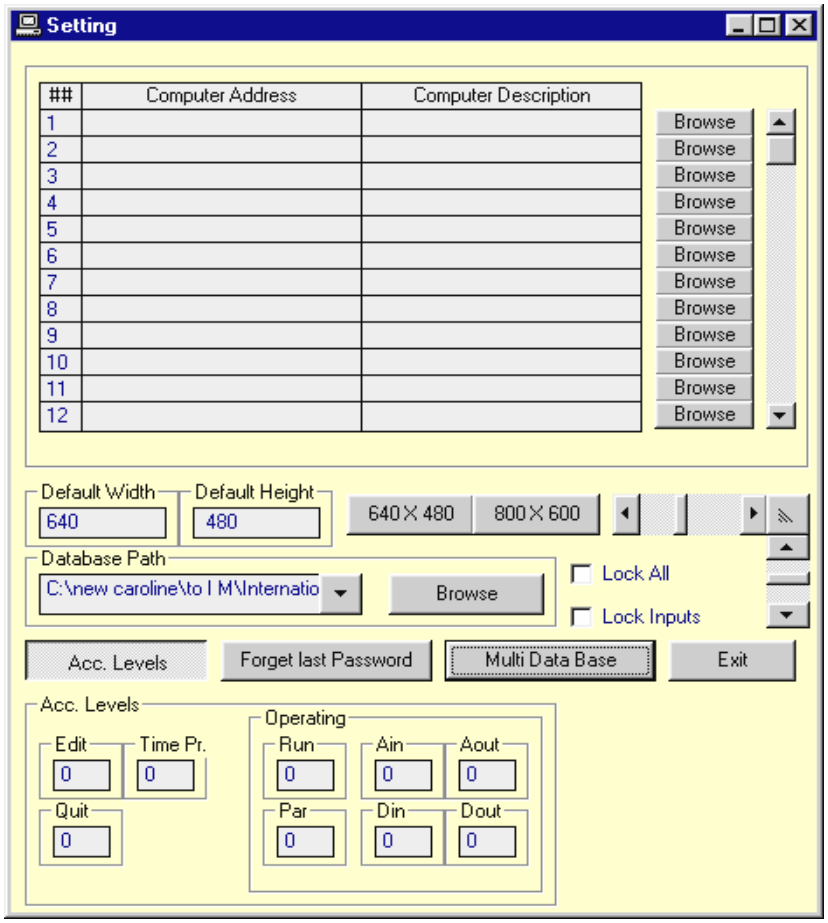


Figure 2.75 - Setting

Computer Address: IP address
Computer Description: name of the computer
Browse: for a computer
Database path and **Browse** for database**.**

Default Width
Default Height } for graphic displays

Vertical and horizontal **arrows** are for manually changing the height and width of graphic displays. This is not recommended, as the pictures have to fit exactly to the screen.

Lock All: prevents all graphically displayed values from being changed. You will notice that the cursor icon changes into a padlock when you go over the I/O points in the graphic screens.

Lock Inputs: prevents all graphically displayed input points from being changed.
Forget last password: usually the computer will remember for a couple of minutes that a password has been entered and it will not require that it be re-entered. This option ensures that the computer will always require a password. The main use for this option is for the supervisor to check that passwords have been put in the right place.
Multi Database: for use of Control Applications Ltd. personnel only.
Exit: to exit the screen.

Notice that here **Acc. Levels** is depressed and has opened the bottom section of the screen.

- **Edit:** set access level for all Edit options.
- **Time Program:** set level for access to time programs.
- **Quit:** set access level for quitting UniArt via the vertical toolbar and the taskbar next to the clock.

Operating: sets default for new data and for Reset Access Levels option for the following:

- **Run**
- **Ain**
- **Aout**
- **Par**
- **Din**
- **Dout**

2.10 - Exit

The tenth icon on the vertical taskbar in *Figure 2.02* is the exit button.

2.11 - Last icon

This button is reserved for future use.

SECTION 3

HORIZONTAL TASKBAR

The icons on the horizontal taskbar, as seen in *Figure 3.1*, represent shortcuts to groups of points.

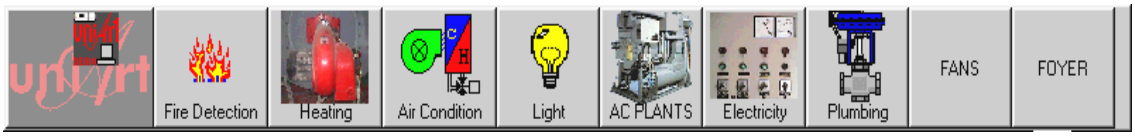


Figure 3.1 – Horizontal Taskbar

In order to create a Zoom link to a group, click on any icon with the right mouse button while holding down <Shift>. The screen in *Figure 3.2* should appear.

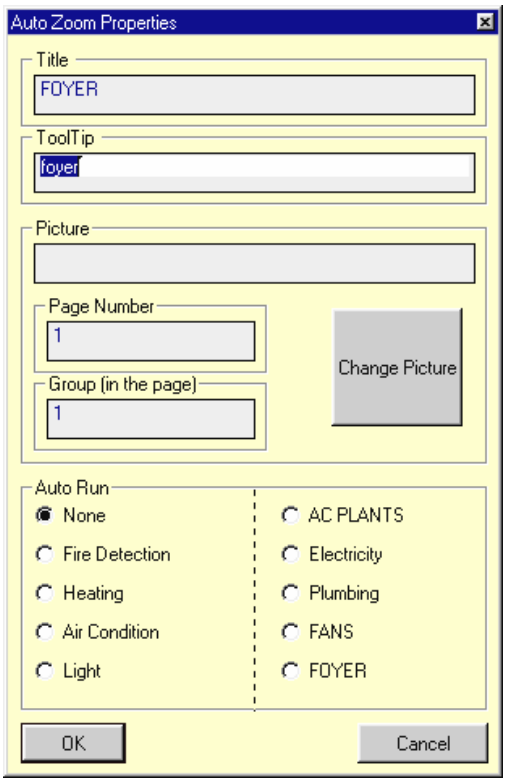


Figure 3.2 – AutoZoom Properties

Title: Name to appear with the picture.
Tool Tip: Text to appear when resting the cursor over the icon.
Picture: Name of the picture (if it has one).
Change Picture: Click here to open *Select Image* screen. From there you can choose an image to appear as the icon. Here the box is grey as no picture has been selected.
Page: The page to jump to when the icon is selected.
Group: The group of points to jump to when the icon is selected.
Auto Run: The group that is to be opened automatically when you run UniArt.

EXAMPLE: The above properties were chosen from the far right icon on the horizontal taskbar that I named FOYER. This button has been set to zoom to Group 1 in Page 1. If you look in *Figure 2.03* you will see that the first group

on the first page is AHU1-1 FOYER. Pressing on this button will make you jump to the same picture as in *Figure 2.19* .

Appendix A - Network (includes PC's, COMs, Ports and Controllers)